DOCUMENT RESUME

ED 330 516 RC 018 064

TITLE Rural Health Abstracts and Citations 1980-1987. Part II: Indian Health Care.
INSTITUTION North Dakota Univ., Grand Forks. Center for Rural Health.
SPONS AGENCY Health Resources and Services Administration (DHHS), Rockville, MD. Office of Rural Health Policy.
PUB DATE 88
CONTRACT HAR000004-01
NOTE 103p.; "Part I: Rural Hospitals" and "Part III: Rural Health Professionals" are not included in ERIC.
AVAILABLE FROM The Center for Rural Health, University of North Dakota School of Medicine, 501 Columbia Road, Grand Forks, ND 58201.
PUB TYPE Reference Materials - Bibliographies (131)

EDRS PRICE MF01/PC05 Plus Postage.
DESCRIPTORS Alaska Natives; *Alcoholism; *American Indians; Birth; Cultural Differences; *Diseases; *Drug Addiction; Health Education; Health Facilities; *Health Services; Hypertension; *Mental Health; Pharmacy; Physicians; Pregnancy; Rural Areas; Substance Abuse
IDENTIFIERS Healing; Medicine Men

ABSTRACT

Over 300 articles concerning rural health as it pertains to American Indians and Alaska Natives are cited in this bibliography. Most of the articles were published between 1980 and 1988. Abstracts are reprinted verbatim and the bibliography is organized into sections by subject matter. Within each section, annotated citations are listed alphabetically by author, followed by a list of additional citations without abstracts. "Alcoholism & Drug Dependency" includes citations concerning treatment and prevention of alcoholism, characteristics of Indian substance abusers, and sociocultural factors. The "Clinical" section contains citations on infectious diseases, mental illness, diabetes, hypertension, and fertility. The topics of health care professions for Indians, early intervention programs, and community health services are included in "Education and Promotion." "Facilities and Services" lists citations concerning ambulatory care services, pharmacy services, and health care on Indian reservations. "Traditional Medicine" deals with native healing practices, medicine men and women, and childbearing practices. The last section includes "Miscellaneous" articles. The appendix describes services offered by The Center for Rural Health. (KS)

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Rural Health Abstracts and Citations

1980-1987

PART II: INDIAN HEALTH CARE

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The University of North Dakota Rural Health Research Center
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Rural Health Abstracts and Citations

1980-1987

PART II: INDIAN HEALTH CARE

The Center for Rural Health
University of North Dakota School of Medicine

The U.N.D. Rural Health Research Center is supported by The Office of Rural Health Policy in the Health Resources and Services Administration, U.S. Department of Health & Human Services. (Grant No. HAR000004-01; $195,739;)

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ACKNOWLEDGMENTS

The Center for Rural Health at the University of North Dakota School of Medicine would like to acknowledge the contributions of individuals and organizations for their patience and assistance in the development preparation of Rural Health Abstracts and Citations. Ira Moscovice, Ph.D. of the University of Minnesota and Sam Cordes, Ph.D. of the University of Wyoming were especially helpful in the formative stages of the project. The members of The Center's National Advisory Group were also quite helpful in providing us with guidance in the project. Other individuals who devoted time and effort to the project include David Boilard and the staff of the Harley E. French Library of the University of North Dakota Health Sciences programs; and Fred Eldridge, a micro-computer consultant with the University's Computer Center. Joyce Altobelli and Terry Stratton of The Rural Health Research Center worked many hours to enter the abstracts and citations. Without their efforts, the project would continue to be an idea on the shelf. Also, the entire support staff of The Center were always willing to give just a little more to meet the deadlines. Finally, project would not have been possible without the support of The Office of Rural Health Policy, Department of Health and Human Services and The Bush Foundation of St. Paul, Minnesota.

PREFACE

It should be noted that the articles contained within this bibliography are not annotated. That is, the abstracts of the peer-reviewed journal articles are reprinted verbatim. In addition, many of the current rural health publications were in the form of short articles which appeared in various trade journals (i.e., **Hospitals**). Since these types of articles (usually five pages or less) generally do not have abstracts, only the citation of the article is listed.

As with any project of this nature, there are certain caveats and clarifications for the reviewer to note. First, there are some articles in the abstracted sections that do in fact have abstracts; the reprints of these articles were simply late in arriving at The Center and, as a result, did not allow us the opportunity to include their complete abstract. These abstracts, however, will be reprinted in the updated volume at a later date. Secondly, we apologize to those authors whose work should but does not appear in this volume. Although we have made every effort to publish a comprehensive bibliography, we recognize that some publications will be inevitably overlooked. This is especially true for the most recent publications (late 1987 and 1988). Again, we hope to rectify these oversights as this volume is updated.

ABSTRACTED CITATIONS

Aase, J.M.
"The Fetal Alcohol Syndrome in American Indians: A High Risk Group", Neurobehavioral Toxicology Teratology, (Summer, 1981), 3 (2), 153-156.

There are several factors which might increase the risk for Fetal Alcohol Syndrome in Native American groups. Cultural influences, fertility, patterns of alcohol consumption and abuse, and perhaps dietary and metabolic differences may be involved. The suspicion of increased occurrence of Fetal Alcohol Syndrome in the Indian population is presently based upon incomplete or anecdotal evidence, but studies are now underway to define actual prevalence rates in some of these groups.

Bach, P.J. and Bornstein, P.H.
"A Social Learning Rationale and Suggestions for Behavioral Treatment with American Indian Alcohol Abusers", Addictive Behaviors, (1981), 6 (1), 75-81.

Social learning theory postulates that modeling of overt behavior and the individual's cognitive representation of his/her behavior are two factors causally related to one's actions. Four factors are identified as central to alcohol abuse among American Indians: (a) rapid consumption of alcohol; (b) outmoded models of prolonged intoxication; (c) non-responsibility for intoxicated behavior; and (d) the peer drinking group. It is demonstrated that each of these four factors can be adequately accounted for using a social learning theory paradigm and consequently addressed within a behavioral treatment program.

Beauvais, F., Oetting, E.R. and Edwards, R.W.
"Trends in Drug Use of Indian Adolescents Living on Reservations: 1975-1983", American Journal of Drug and Alcohol Abuse, (1985), 11 (3-4), 209-229.

Anonymous surveys on drug use were administered to 7th-12th grade students in Indian reservation schools. A large number of tribes were surveyed from 1975 through 1983. There is reason to believe the results are reasonably representative of Indian youth living on reservations. Lifetime prevalence for most drugs is higher than that for non-Indian youth throughout this period, and rates for alcohol, marijuana, and inhalants, the most frequently tried drugs, were

particularly high. Since 1981 there has been a slight drop, in lifetime prevalence for most drugs. Current use figures show the same trends, with increasing current use through 1981 and a drop since that time. Analysis of patterns of drug use, classifying youth according to number, type, and depth of involvement with drugs, shows a similar trend, with radical increases until 1981 and then a drop in all but one of the more serious drug use types. Despite this drop, 53% of Indian youth would still be classified as "at risk" in their drug involvement, compared with 35% of non-Indian youth. Reasons probably relate to severely detrimental conditions on reservations; unemployment, prejudice, poverty, and lack of optimism about the future.

Carpenter, R.A., Lyon, C.A. and Miller, W.R.
"Peer-Managed Self-Control Program for Prevention of Alcohol Abuse in American Indian High School Students: A Pilot Evaluation Study", The International Journal of the Addictions, (February, 1985), 20 (2), 299-310.

A peer-managed self-control program to teach responsible drinking was tested with 30 American Indian teenagers at high risk for problem drinking. Students were randomly assigned to three groups incorporating combinations of self-monitoring, peer-assisted self-control training, and alcohol education. Significant decreases were observed in quantity and frequency of drinking and in peak blood alcohol levels. These improvements were maintained at follow-ups of 4,9 and 12 months posttreatment. Self-report data were corroborated by breath tests and official records. No group differences were found, indicating that minimal and full program interventions had comparable effects.

Cohen, F.G., Walker, R.D. and Stanley, S.
"The Role of Anthropology in Interdisciplinary Research on Indian Alcoholism and Treatment Outcome", Journal of Studies on Alcohol, (September, 1981), 42 (9), 836-845.

The Seattle Indian Alcoholism Program offers a comprehensive Indian-oriented rehabilitation system. Anthropology is an integral part designed to document and evaluate the treatment program.

Falk, J.L.
"Drug Dependence: Myth or Motive?", Pharmacology Biochemistry & Behavior, (1983), 19, 385-391.

The acceptability of nonmedical use for a particular drug is a function of diverse social needs. Drug dependence is due less to intrinsic effects than to the situation in which drug taking occurs. An

addictive level of drug self-administration is a symptom of behavioral troubles rather than a definition of the trouble itself. The intrinsic effects of drugs do not in themselves produce either misuse or evoke specific kinds of behavior such as sexual or aggressive activities. Drugs can, however, come to function as discriminative stimuli for socially sanctioned behavior that would not under other circumstances be tolerated. The intrinsic reinforcing potential of an agent evolves in and dominates situations in which other reinforcing opportunities are either absent or remain unavailable to an individual who is unprepared to exploit them. While certain intrinsic properties of a drug contribute to its potential as a reinforcer (e.g., rapid onset and brief duration of action), reinforcing efficacy is notoriously malleable. It is a function of historic and currently-acting factors, particularly social reinforcers. The importance of physical dependence in the maintenance of drug seeking and taking is mainly unproven and probably overrated. Situations under which important reinforcers are available only in small portions intermittently can induce various excessive activities, including an untoward concern with obtaining and using drugs. Drug dependence prevention as a species of environmental dependence can be best effected by either alterations in the intermittent reinforcement situations inducing excessive behavior or by providing opportunities and training with respect to reinforcing alternatives other than drugs.

Fisher, A.D.
"Alcoholism and Race: The Misapplication of Both Concepts to North American Indians", The Canadian Review of Sociology and Anthropology, (1987), 24 (1), 80-98.

This paper discusses problems in the use of the concept of race in regard to alcoholism. It discusses the related difficulty of applying the bio-genetic model of alcoholism and its transmission to the peoples commonly called Indians of North America. Because of the manifest sociocultural differences among groups of Indians, and because of modern views on human bio-genetic variation, it is concluded that the common alcohol abuse problems shared by these groups are most probably rooted in the groups' relations to the means of production in North America, and not in their 'Indianness,' whether biologically or culturally understood.

Flores, P.J.
"Alcoholism Treatment and the Relationship of Native American Cultural Values to Recovery", The International Journal of the Addictions, (November-December, 1985), 20 (11-12), 1707-1726.

Native American alcoholics, Native American nonalcoholics, Anglo alcoholics, and Anglo staff were compared on demographics and the Rokeach Value Survey. The subjects were from an inpatient alcohol treatment program of a rural community mental health center located 1

mile from the boundary of a large southwestern Indian reservation. Results from this study provide evidence which supports the poorer prognostic rates of alcoholism recovery for Native American alcoholics.

Evidence is also presented which suggests that Native Americans' values are measurable and significantly different from Anglo values. While the relationship between values and recovery was difficult to discern, it is suggested that the disparity in values between the two cultures is one reason why so few Native American alcoholics remained in treatment.

French, L.A. and Hornbuckle, J.
"Alcoholism Among Native Americans: An Analysis", Social Work, (1980), 25, 275-280.

This article will approach alcoholism among Native Americans from a psychocultural perspective, which isolates Native American alcoholism from alcoholism in society in general. At times, this approach may appear to be at odds with more conventional etiologies and popular methods of treating alcoholism that are advocated by psychologists, psychiatrists, social workers, and medical personnel. Nevertheless, this approach fits the current multidisciplinary framework recommended by the National Institute on Alcohol Abuse and Alcoholism.

Guyette, S.
"Selected Characteristics of American Indian Substance Abusers", The International Journal of the Addictions, (August, 1982), 17 (6), 1001-1014.

Previous research on American Indian drug abuse has focused on descriptive, epidemiological studies of youth. There exists a paucity of information concerning adult use, patterns of use, and treatment approaches. Data on characteristics of 71 adult American Indians in an urban treatment program are reported, including patterns of use and cultural implications of use. The study results discuss the tendency for introduction to drugs in the street setting and patterns of combination drug use.

Hill, T.
"Life Styles and Drinking Patterns of Urban Indians", Journal of Drug Issues, (Spring, 1980), 10, 257-272.

This article describes the major life styles and drinking patterns of the "everyday" Winnebago and Santee Dakota of Sioux City, Iowa. An intensive research strategy and methodology which included extensive participant observation were used in the collection of data. Throughout the research an attempt was made to see drinking activities

in terms of the Indians' cultural systems. In contrast to the researchers who argue that a single set of drinking standards or norms is shared across ethnic and class lines in the United States, it is shown that multiple sets are used by the Indians of Sioux City and that some sets define some forms of heavy and frequent drinking as acceptable behavior.

Hughes, S.P. and Dodder, R.A.
"Alcohol Consumption Patterns Among American Indian and White College Students", Journal of Studies on Alcohol, (September, 1984), 45 (5), 433-439.

College students in Oklahoma completed a self-administered questionnaire to compare the drinking behaviors of culturally active American Indians (N=34 men and 24 women) and Whites (N=181 men and 250 women). Significantly more Indians were classified as drinkers, but they had begun drinking at a somewhat later age. Both groups indicated a preference for beer, and they were quite similar in quantity and frequency of beer comsumption. White students reported drinking significantly more wine and distilled spirits, and drinking more often in public places, such as bars, pubs, restaurants and parked cars; Indians drank more in their own homes and in the homes of friends. White students tended to cite hedonistic reasons for drinking whereas Indians reported escapist or social reasons and drinking to "get high." Drinking-related problems were reported somewhat more often by Indian students, notably so by Indian women. Indians were more inclined to report the more serious drinking problems of being arrested, blacking out, interference with school or work, and difficulties in human relationships. White students more often cited problems of nausea or vomiting, drinking and driving, doing something that was later regretted and damaging property. It was suggested that the higher Indian arrest rate could be indicative of police bias and that the reports of problem drinking among Indian women be investigated further.

Hurlburt, G., Gade, E., and Fuqua, D.
"Personality Differences Between Alcoholics Anonymous Members and Non-Members", Journal of Studies on Alcohol, (1984), 45 (2), 170-171.

The purpose of this study was to determine whether there are personality differences between members of Alcoholics Anonymous and nonmembers. A total of 91 alcoholics who were active members of A.A. and who had completed at least six months of abstinence were matched by race and sex with 91 alcoholics who had recently completed alcoholism treatment and who were not A.A. members. Four scales of the Eysenck Personality Questionnaire (EPQ), measuring toughmindness, emotionality, extroversion and "fakability," were administered to both groups. A 2 x 2 x 2 multivariate analysis of variance was performed using sex (men, women), race (American Indian, Caucasian) and group (A.A., non-A.A.) as the independent variables. The main effects of race and

group were significant, but none of the interaction effects were significant. American Indian alcoholics were significantly more toughminded than the Caucasians. A.A. members were significantly more extroverted and less toughminded and emotional than non-members.

Jones-Saumty, D.J., and Zeiner, A.R.
"Sociocultural and Psychological Factors Related to Alcoholism Among American Indians and Caucasians", Arukoru Kenkyuto Yakubutsu Ison, (December, 1985), 20 (4), 367-374.

The Indian Health Service considers alcoholism to be the major health problem of American Indians today. Various factors may contribute to the problem of American Indian alcohol abuse. Chief among these are psychological and sociocultural influences. Psychological factors such as depression, locus of control, and cognitive functioning have been proven to be useful measures in predicting treatment outcome and risk for alcohol-related problems.

Sociocultural factors such as age, education, ethnic background, and socioeconomic status have been shown to be related to alcoholism and its concurrent problems. This paper reviews etiological theories relating sociocultural and psychological factors to American Indian alcoholism. We further assess the comparability of an American Indian alcoholic sample on psychological adjustment and sociocultural factors relative to major studies in the literature which report similar data for alcoholics from the general population.

Jones-Saumty, D.J., Dru, R.L. and Zeiner, A.R.
"Causal Attribution of Drinking Antecedents in American Indian and Caucasian Social Drinkers", Advances in Alcohol and Substance Abuse, (Fall, 1984), 4 (1), 1-8.

Sixty-five American Indian and 100 Caucasian college students were tested with Beckmen's rating scale for antecedents of drinking. Subjects were social drinkers who had had no previous alcohol-related problems (arrests, accidents, etc.). They were matched on age, education, and drinking history. The scale addresses beliefs about drinking and its related causes--internal and external. Results indicate only one major difference between Indians and Caucasians (alcoholism as an illness was rated higher by Indians), while similarities in rating patterns were found in comparing our college sample to college students from the Los Angeles area tested by Beckman. American Indian college students were significantly different in the casual attribution of drinking problems from white college students in Los Angeles.

Kivlahan, D.R., Walker, R.D., Donavan, D.M. and Mischke, H.D.
"Detoxification Recidivism Among Urban American Indian Alcoholics", The American Journal of Psychiatry, (December, 1985), 142 (12), 1467-1470.

Fifty urban American Indians were interviewed during admission to a free-standing medical detoxification unit. From the year before the interview through 2 years of follow-up, this sample averaged 44.6 detoxification admissions and 64.1 days in other patient treatment and had no significant change in the number of annual detoxification admissions. At follow-up all but three subjects reported recent alcohol dependence symptoms or episodic alcohol abuse. These patients continued to experience serious alcohol-related problems despite repeated treatment in both medical detoxification and inpatient rehabilitation settings. These findings emphasize the need for more innovative and effective alternatives to the existing revolving door process.

Liban, C.B. and Smart, R.G.
"Drinking and Drug Use Among Ontario Indian Students", Drug and Alcohol Dependency, (April, 1982), 9 (2), 161-171.

From the sample of Ontario students in grades 7 through 13 surveyed during 1979, 64 students of Native Indian parentage were successfully matched with 64 non-Indian students on five demographic variables. A comparison of alcohol and drug use among the two groups suggested that Indian students use alcohol and drugs in a manner similar to that of their peers in the same geographical locale and socio-economic background.

Longclaws, L., Barnes, G.E., Grieve, L. and Dumoff, R.
"Alcohol and Drug Use Among the Brokenhead Ojibwa", Journal of Studies on Alcohol, (January, 1980), 41 (1), 21-36.

The frequency of alcohol and drug use among a band of Ojibwa Indians was surveyed and predictors of alcohol and drug use were examined.

Mail, P.D. and McDonald, D.R.
"Tulapai to Tokay: A Biliography of Alcohol Use and Abuse Among Native Americans of North America", reviewed in Medical Anthropology Newsletter, (1982), 13 (2), 24-25.

Reviewed by Thomas W. Hill, Ph.D., this volume is an annotated bibliography of over 960 entries dealing with contemporary Native American drinking practices. About one-third of the entries are unpublished, but the authors have deposited copies of these at the Center of Alcohol Studies at Rutgers University through which the

reader can request copies. Also contained in the volume is a 56-page review of the literature and author and subject indexes. Hill cites some minor criticisms: exclusion of historical studies; incompleteness of the annotations and subject index. But Hill concludes with "Any individual seriously interested in alcohol use or abuse among Native Americans will want to have access to this volume."

May, P.A.
"Alcohol and Drug Misuse Prevention Programs for American Indians: Needs and Opportunities", Journal of Studies on Alcohol, (May, 1986), 47 (3), 187-195.

General drug misuse among American Indians has been in need of attention for years. A specific and critical examination of mortality and morbidity statistics yields a number of valuable insights to the ways of addressing the problem. The current status in many communities dictates intervention at three levels. First, high mortality and morbidity rates must be reduced through creative and innovative intervention with the social and physical environment. Alcohol legalization and other issues are discussed as distinct possibilities. Second, educational programs are needed to elevate the knowledge of American Indian communities about alcohol and drug misuse. Education should be specifically oriented to improving ability to deal with early developmental problems that might lead to misuse. Third, American Indian rehabilitation programs need to be upgraded and improved by gaining more resources and by using them more effectively. Increased use of both traditional tribal strengths and modern treatment modalities is promising. Rehabilitation programs may be even more important in the future if mortality reduction programs such as those described are successful.

May, P.A.
"Substance Abuse and American Indians: Prevalence and Susceptibility", The International Journal of the Addictions, (October, 1982), 17 (7), 1185-1209.

The use of alcohol and other substances by American Indians has received considerable popular attention over the years. Empirical studies of prevalence for all types of substance abuse, however, have generally been few and limited in scope. In this paper prevalence studies among Indians are reviewed and analyzed by comparison with each other and national studies. In addition, issues important to the research of Indian alcohol and drug abuse are discussed. Finally, a specific scheme of susceptibility is proposed which may explain the patterns of variation in both tribal and individual substance abuse.

Oetting, E.R. and Beauvais, F.
"Drugs and Native American Youth: A Summary of Findings (1975-1981)", NIDA Project Report, Project #5 ROIDA1853. (Fort Collins: Colarado State University, 1982.)

Reservation Native-American youth (12-17) use drugs more than other youth, particularly marijuana, inhalants, stimulants and cocaine. Anti-drug messages may have influenced light users whose use has dropped, but not heavy users; one in five Indian youth use drugs other than marijuana, a rate constant since 1981.

Drug use is linked neither to emotional distress nor acculturation stress. It is related to peer drug associations, although less strongly than in Anglo youth, and is linked more directly than in Anglo youth to family influence. Root causes may be poverty, prejudice, and lack of social, educational and economic opportunity on reservations.

Oetting, E.R., Edwards, R., Goldstein, G.S. and Garcia-Mason, V.
"Drug Use Among Adolecents of Five Southwestern Native American Tribes", The International Journal of the Addictions, (1980), 15 (3), 439-445.

Drug use by Native American adolescents from five Southwestern tribes is compared with a large national sample. Native Americans show higher use of alcohol, marijuana, and inhalants from the 7th through the 12th grade. They show lower use of barbituates. Peyote may be seen as less dangerous then LSD. There are no significant differences for other drugs. Cultural characteristics that may influence potential danger from drug use and intervention strategies are noted.

Oetting, E.R., Goldstein, G., Beauvais, F. and Edwards, R.
Drug Abuse Among Indian Children. Interim Report, NIDA Grant 1R01-DA01853. (Fort Collins: Colorado State University, 1980.)

This interim report on drug use among 9 to 12 year olds is part of a series of in-depth studies about Native American drug use. Two methods for obtaining drug use information from young children were tried: interviews and paper and pencil surveys. Interviews were too costly and impractical. A properly constructed survey proved to be more feasible and reliable.

As part of a continuing study, this project grew out of a series of previous studies which focused on drug use by Native American adolescents. This review of the studies shows that they have a far higher rate of use for nearly all drugs than do young people from a large national sample. By the time these children were 13, when the study began, many had already been using drugs for some time. This project, therefore, was planned to develop and test methods for surveying drug use by younger children, from 9 to 12 years old.

The present study, using a sample of over a thousand Native American 9 to 12 year olds, shows that drug use is high among these children. There are no national data for young children, but charts of drug use by age show that by the time these children were 12 years old they had used marijuana, inhalants, and alcohol more than the average for a national sample of children who were much older, 12 to 17 years old. Use of cigarettes is also very high and is correlated with other drug use. Many of these young children who are involved heavily with other drugs are also beginning to experiment with "pills".

The survey also included a number of measures of potential correlates of drug use. The results suggest that all of the following are important in understanding drug use among young Native American children: the community, cultural identification, the family, the school, peers, emotional problems, expectancy about the future, attitudes toward drugs, and deviant attitudes and behaviors.

Copies of statistical appendices to the report are available from:

Western Behavioral Studies
Department of Psychology
Colorado State University
Fort Collins, CO 80523

Page, R.D. and Bozlee, S.
"A Cross-Cultural MMPI Comparison of Alcoholics", Psychological Reports, (1982), 50, 639-646.

MMPI profiles of 11 Caucasian, 11 Hispanic American, and 11 American Indian alcoholics were compared. The subjects were chosen randomly from among veterans in treatment for alcoholism at a small VA Medical Center. Subjects represented similar secondary diagnoses and did not differ significantly in age or education. One-way nonrepeated-measures analyses of variance on validity, clinical and the MacAndrews Alcoholism Scales showed significance only for Scale 2 scores, elevated for the Hispanic American group but within the normal range. Examination of dominant highpoint code types in each group indicated primarily 4 or 49 for the Caucasians and 24 for the Hispanic Americans. American Indian subjects were more heterogenous with 1, 6, or 9 highpoints. Generally, the resultant profiles conform to previously published alcoholic MMPI prototypes, supporting use of the MMPI for the population studied. The results do not support development of separate MMPI norms for psychiatric subjects from these minority groups, but cross-validation on a larger sample is required.

Rex, D.K., Bostron, W.F., Smialek, J.E. and Li, T.K.
"Alcohol and Aldehyde Dehydrogenase Isoenzymes in North American Indians", Alcoholism (NY), (March-April, 1985), 9 (2), 147-152.

Alcohol dehydrogenase (ADH) and aldehyde dehydrogenase (ALDH) isoenzyme phenotypes were determined in autopsy liver samples from 50 North American Indians from New Mexico. Forty-six of the 50 livers had sufficient ADH activity to allow phenotyping at the ADH2 and ADH3 loci. All 46 livers possessed the "typical" ADH2 1-1 phenotype. The frequency of the ADH2/3 allele was 0.59 and is the highest thus far reported in any racial population. All 50 livers possessed the ALDH 1 isoenzyme which exhibits the greatest anodic mobility on starch gel electrophoresis at pH 7.6. The results show that ADH and ALDH phenotypes among Americna Indians living in New Mexico are very similar to those of Caucasian populations and quite different from those of Orientals.

Schinke, S.P., Gilchrist, L.D., Schilling, R.F., Walker, R.D., Kirkham, M.A., Bobo, J.K., Trimble, J.E., Cvetkovich, G.T., and Richardson, S.S.
"Strategies for Preventing Substance Abuse with American Indian Youth" White Cloud Journal of American Indian Mental Health, (1985), 3 (4), 12-18.

Primary prevention is an appealing response to substance abuse problems among American Indian people. Still, substance abuse prevention programs developed with Indian people, based on empirical data and oriented toward youth, have not been forthcoming. This paper offers culturally sensitive, scientific strategies for closing gaps in the substance abuse prevention research literature. The authors describe strategies of assessment, design, implementation, and evaluation in the service of preventing substance abuse with American Indian youth. Each strategy is illustrated by the authors' research. The stategies are discussed relative to their advantages, limits, and research agenda.

Schinke, S.P. and Schilling, R.F.
"Pacific Northwest Native American Youth and Smokeless Tobacco Use", The International Journal of the Addictions, (1987), 22 (9), 881-884.

This study examined snuff and chewing tobacco use among Alaska Native and American Indian adolescents. Results show frequent and early use of smokeless tobacco products. Almost one fifth of all females and close to one half of all males had used snuff or chewing tobacco on more than 20 occasions. Weekly smokeless tobacco use was reported by 34% of all females and by 42% of all males. By product type, 32.6% of all subjects had used snuff and 27.8% had chewed tobacco in the past week. Among females, over one half of all subjects had used snuff or chewing tobacco before age 10 years. Among males, nearly one half of the subjects first used smokeless tobacco prior to 8 years of age. Few subjects had used cigarettes or other smoked tobacco products.

Stratton, R.
"Relationship Between Prevalence of Alcohol Problems and Socioeconomic Conditions Among Oklahoma Native Americans", Current Alcohol, (1981), 8, 315-325.

Oklahoma Indian tribes are ranked according to five problem drinking indicators and five socioeconomic indices. The relationships between the tribes' prevalence of alcohol problems and socioeconomic conditions predicted high rates of alcohol problems, but more favorable conditions did not predict low rates. Social controls may be more important than socioeconomic conditions in controlling alcohol problems among Oklahoma Native Americans.

In a previously published study we found that Native American tribes in Oklahoma varied dramatically in the extent to which they suffered from alcohol problems. In this followup study we have sought explanation for these large differences by comparing the socioeconomic conditions of the tribes to their rates of alcohol related problems.

The relationship between socioeconomic conditions and alcohol problems has received considerable attention in the literature. Popham, et al. found that when the price of beverage alcohol relative to average disposable (real) income is high, indices of alcohol consumption and alcoholism are usually low, and vice versa. In a similar vein, Edwards et al. suggested that alcoholism is likely to increase the risk of death more in upperclass than in lowerclass alcoholics. On the other hand, others have blamed economic deprivations for high rates of problem drinking, especially among disadvantaged minorities. Price suggested that Indian societies which had little access to economic opportunities have more drinking problems than those with great access. Caravedo found that socioeconomic deprivation is a primary factor in both the etiology and the medical consequences of alcoholism.

Tucker, W.B.
"U.S. Ethnic Minorities and Drug Abuse: An Assessment of the Science and Practice", The International Journal of the Addictions, (1985), 20 (6 & 7), 1021-1047.

Despite the disproportionate use of "hard drugs" in certain ethnic minority communities, and the unique patterns of drug abuse in others, many have complained that there remains an absence of attention paid to the special problems of substance abuse by Afro-Americans, American Indians, Asian-Americans, and Latinos. Furthermore, no comprehensive review of drug abuse by American ethnic minorities has ever been undertaken. In response to these concerns, an assessment of the current status of the drug abuse field, relative to ethnic minorities, was undertaken. The review included delineation of ethnic-specific problems and the institutional and scientific responses to those concerns. Strategies for addressing inadequacies are proposed.

Walker, R.D. and Kivlahan, D.R.
"Definitions, Models, and Methods in Research on Sociocultural Factors in American Indian Alcohol Use", Substance and Alcohol Actions Misuse, (1984), 5 (1), 9-19.

This paper presents a critical discussion of the definitions, conceptual models, and methodological issues that researchers should consider in studies of sociocultural influences on drinking practices and problems. In particular, these concerns are related to studies of American Indian and Alaskan Native people. In an effort to avoid overgeneralized explanatory statements, it is recommended that efforts be made to study more specific aspects of such loosely defined terms as culture, alcoholism, and "Indianness." Research in this area might usefully be guided by parsimonious conceptual models developed and investigated in the dominant culture; however the extent to which relationships observed within one group generalized to another group remains an empirical question. Operationalizing variables and collecting valid data cannot be assumed to have equal applicability with different subgroups. By remaining sensitive to the methodological implications of sociocultural differences, investigators can more accurately clarify the processes by which complex biological, psychological, and sociocultural factors influence alcohol use and misuse in any individual or group.

Weibel-Orlando J., Weisner, T. and Long, J.
"Urban and Rural Indian Drinking Patterns: Implications for Intervention Policy Development", Substance and Alcohol Actions Misuse, (1984), 5 (1), 45-57.

Alcohol misuse has taken on epidemic proportions among some (but not all) American Indian populations. Cultural, psychological, socioeconomic and genetic etiologies have been offered to explain this social phenomenon. This study identifies the relative strengths of these causal models to differentiate among both current and lifelong drinking career patterns. Further, antecedent and drinking level differences between urban and rural Indian populations in California are described. Age, sex, level of stress as measured by the Cornell Medical Index, percent of Indian ancestry and level of drinking in the family of origin are less powerful predictors of drinking level. Policy implications of these findings include: the development of intervention programs which involve members of the patient's support network, accelerated interventions in rural Indian communities and mid-level interventions among younger and less debilitated, but identifiably "at risk", populations.

Weisner, T.S., Weibel-Orlando, J.C. and Long, J.
"'Serious Drinking', 'White Man's Drinking', and 'Teetotaling': Drinking Levels and Styles in an Urban American Indian Population", Journal of Studies on Alcohol, (May, 1984), 45 (3), 237-250.

The differences between abstainers, moderate drinkers and heavy drinkers were examined in American Indians living in Los Angeles, California. Equal numbers of these three groups (total N=155) were selected from four tribal groups: Siouan-speaking, Navaho, Five Civilized Tribes (of eastern Oklahoma origin) and indigenous California tribes. The relative predictive powers of sociostructural, cultural and psychological variables in accounting for current drinking levels were then assessed. The results indicated that, much as for non-Indian populations, heavy drinkers were more likely to have had heavy-drinking models in the family of origin, to be men and to score high on psychophysiological stress indices. Socioeconomic status and traditionalism were found to be weaker predictors of drinking level. Differences in drinking styles over individuals' lifetimes and between tribes were also studied. Ethnographic observations, case vignettes and statistical summaries of the sample by tribe and by drinking level showed that tribal origins, age and socioeconomic status influenced drinking style and attitudes toward alcohol, even if they did not predict the current drinking level of the subjects.

Westermeyer, J. and Neider, J.
"Depressive Symptoms Among Native American Alcoholics at the Time of a 10-Year Follow-Up", Alcoholism (NY), (September-October, 1984), 8 (5), 429-434.

Much has been written about alcoholism among Native Americans, its prevalence, characteristics, and treatment. Depression has received relatively little attention in this population, however. This is somewhat unexpected in view of evidence suggesting that Native Americans experience frequent and major losses from premature death of family members, loss of children to state guardianship and foster care, loss of job, loss of freedom due to arrest and incarceration, and loss of prestige in the majority society. In this study, data on depressive symptoms were collected from 33 Native American persons at the time of a 10-year follow-up. They had been admitted for alcoholism at the University of Minnesota Hospitals.

Westermeyer, J. and Peake, E.
"A Ten-Year Follow-Up of Alcoholic Native Americans in Minnesota", American Journal of Psychiatry, (February 1983), 140(2), 189-194.

In a 10-year follow-up of 45 alcoholic American Indians, 42 (93%) were located. Seven had been abstinent for 2 or more years, 26 still had drinking problems despite repeated treatment, and 9 had died. The authors hypothesize that the absence of stable employment and a stable

marriage or family environment reduced the efficacy of treatment efforts in this population. Those who achieved 2 years of abstinence were characterized by stable employment and/or marriage, as well as by stronger interpersonal relationships and less depression than the others. The recovered subjects provided considerable help to other alcoholic persons in addition to serving as positive role models.

Whitley, G.P.
"Reservation Versus Nonreservation American Indians' Loci of Control and Consumption of Alcohol", Psychological Reports, (April, 1980), 46 (2), 431-434.

Rotter's Internal-External Control Scale was administered to 85 adult American Indians. The reservation group included 44 subjects, 18 of whom were heavy drinkers. The nonreservation group was composed of 41 subjects, 15 of whom were heavy drinkers. Subjects living on the reservation had scores more internal than subjects living outside the reservation. Heavy drinkers were more internal than light drinkers.

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"Drug Treatment Effectiveness: The Case of Racial and Ethnic Minorities in America - Some Research Questions and Proposals", The International Journal of the Addictions, (1985), 20 (1), 99-137.

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"Alcoholism and the Native Americans: A Review of the Literature", Alcohol and Health Monogram No. 4. (ADM 82-1193), Special Population Issues. (Rockville, MD: Alcohol, Drug Abuse, and Mental Health Administration, 1982, p. 334.)

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"The History of North American Indian Alcohol Use as a Community-Based Phenomenon", Journal of Studies on Alcohol, (January, 1981), supplement 9, 29-39.

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"Treatment Strategies in an Urban Indian Alcoholism Program", Journal of Studies on Alcohol, (January, 1981), supplement 9, 171-184.

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"Alcohol and the Standing Rock Sioux Tribe: A Twenty-Year Follow-Up Study", Journal of Studies on Alcohol, (March, 1982), 43 (3), 191-200.

ABSTRACTED CITATIONS

Baxter, J.D., Julien, G., Tewfik, T.L., Ilecki, H.J., and Crago, M.B. "Observations on the Prevalence of Ear Disease in the Inuit and Cree Indian School Population of Kuujjusraapik", Journal of Otolaryngology, (February, 1986), 17 (1), 7-11.

In the last twenty years it has been recognized that hearing loss as the result of middle ear infection and/or noise exposure is a major problem among Canadian Inuit. In the past ten years in the Eastern Canadian Arctic attempts have been made to alleviate the problem and physicians, audiologists and educators have been involved in treatment, training programs and research with varying degrees of success.

In the last few years the Quebec Inuit have become more aware of these problems and have asked for assistance. Whatever evolves, Inuit co-operation and advice is essential; their cultural identity must be respected if any project is to be successful.

In February, 1984, a program outline working paper entitled "Program for Combatting Hearing Disorders in the Inuit Population of Nouveau Quebec" was circulated by Projet Nord-Laval University. The goal of the program was "to ensure the integrity of hearing for the Inuit by preventing hearing loss, identifying hearing loss and minimizing the effects of hearing loss".

In October, 1984 a Pilot Project involving the school population at Kuujjuaraapik was carried out involving personnel from the Projet Nord-Laval University, the Department of Otolaryngology and the School of Human Communication Disorders-McGill University.

Beiser, M.
"Mental Health of American Indian and Alaska Native Children: Some Epidemiological Perspectives", White Cloud Journal, (1981), 2 (2), 37-47.

The large proportion of the American Indian population which is under the age of 15 indicates that behavior scientists need to know more about the psychological functioning of children. Epidemiological studies done thus far have had a number of limitations. Analysis of these studies suggests future directions for research. An effort should be made to empirically define and standardize diagnostic categories. Complex behavior should be based on the observations of people representing multiple perspectives on the child. Studies should also look at mentally healthy behavior of Indian children.

Beiser, M., and Attneave, C.L.
"Mental Disorders Among Native American Children: Rates and Risk Periods for Entering Treatment", American Journal of Psychiatry, (February, 1982), 139 (2), 193-198.

The authors compared national data on use of outpatient mental health services by Native American children in 1974 with 1969 national data on non-Indian children. At all ages except 5 to 9 years, Indians were at higher risk for entering the treatment system than were non-Indian children. In addition, utilization patterns varied by age and sex. The authors discuss possible reasons for the higher risk rates demonstrated by Indian children; these include schools and the effects of poverty.

Broudy, D.W. and May, P.A.
"Demographic and Epidemiologic Transition Among the Navajo Indians", Social Biology, (1980), 30 (1), 1-16.

The theories of demographic transition and epidemiologic transition provide vehicles for the examination of Navajo fertility, mortality, and growth patterns. The Navajo population is found to be growing rapidly due to decreased mortality and fertility rates which have declined but remain twice as high as U.S. rates. Infectious diseases are now less important as a factor in mortality, but remain a problem larger than that in the overall United States. Rates of death from degenerative diseases have not yet become a great problem among the Navajo, but mortality from social pathology (accidents, alcoholism, suicide, homicide, and cirrhosis of the liver) is considerably higher than that in the general United States. Discussion of each of these specific behaviors and possible etiological factors are presented. In general, it can be said that the Navajo Indians represent a group which is in the transitional stage of both the demographic and epidemiologic transition, although some exceptions are noted.

Camazine, S. and Bye, R.A.
"A Study of the Medical Ethnobotany of the Zuni Indians of New Mexico", Journal of Ethnopharmacology, (December, 1980), 2 (4), 365-388.

This paper examines the medical ethnobotany of the Zuni Indians of west-central New Mexico. Historically, these people were hunters and gatherers, and later, farmers and sheepherders. They developed an extensive knowledge of the local flora and a complex religious rite and system of medical practice. Now, as customs and values of Western societies encroach upon their lifestyle, the Zuni's knowledge of the medicinal use of plants is in danger of being forgotten.

Field work conducted during the summers of 1977 and 1978 with the Zuni involved interviews with 27 Zuni medicine men and elders and the collection of 138 plant species. For 49 species a medicinal use was

described. These remedies were examined in detail to determine their pharmacological and psysiological action and their cultural significance. A total of 31 medicinal plants collected in this study were not mentioned in the Zuni ethnobotanical study by Stevenson over 60 years earlier. This may reflect a difficulty in recording all the plant remedies of a culture rather than an acquisition of new remedies since that time. The use of herbal remedies today and the knowledge of their use in the past has diminished.

Chovan, M.J. and Chovan, W.
"Stressful Events and Coping Responses Among Older Adults in Two Sociocultural Groups", The Journal of Psychology, (1984), 119 (3), 253-260.

In this study of the way 32 men and women between the ages of 60 to 90 coped with stressful situations, two instruments were used; the Life Experiences Survey and the Ways of Coping Checklist. Overall, health-related concerns were more frequently reported by older adults than any other stressful event. When coping responses were categorized according to four modes--intrapsychic, inaction, direct action, and information seeking--the Appalachian group was found to use the information-seeking mode; the Cherokee group, the intrapsychic mode. Significant differences were found between males and females in coping modes and life-stress, particularly health-related stress, and the coping modes of intrapsychic and information seeking.

Coulehan, J., Grant, S., Reisinger, K., Killian, P. Rogers, K.D., and Kaltenbach, C.
"Acute Rheumatic Fever and Rheumatic Heart Disease on the Navajo Reservation, 1962-77", Public Health Reports, (1980), 95 (1), 62-68.

Acute rheumatic fever (ARF) and rheumatic heart disease (RHD) occur more frequently among lower socioeconomic groups than among other North American populations. In recent decades, a marked decline in attack rates for ARF has been observed in Europe and the United States. However, no studies of ARF among American Indians have been reported.

The Navajo Indian Reservation comprises about 25,000 square miles of semi-arid canyon and plateau country in northeastern Arizona, northwestern New Mexico, and southern Utah. The Navajo live under crowded family conditions and in a relatively harsh environment. Upper respiratory infections and pharyngitis considered to be streptococcal in etiology are common among Navajo children. Because the Navajo have virtually no coronary artery disease, RHD is the major cause of cardiac morbidity and mortality among them.

To ascertain the frequency, demography, and clinical characteristics of ARF and RHD among the Navajo, all records of patients hospitalized because of either condition over a 16-year period were reviewed. Also, the effect of a streptococcal disease control program was observed over a 3-year period.

Coulehan, J.L., Lerner, G., Helzlsouer, K., Welty, T.K., and McLaughlin, J.
"Acute Myocardial Infarcation Among Navajo Indians, 1976-83", American Journal of Public Health, (April, 1986), 76 (4), 412-414.

We found that from 1976 through 1983 the incidence of acute myocardial infarction (AMI) diagnosed among Navajo Indians remained low (0.5 per 1,000 persons age 30 years or more), although the incidence in women appears to be climbing. Navajo AMI patients are more likely to be hypertensive and diabetic than age- and sex-matched patients with gallbladder disease. Twenty-four percent die within one month of AMI.

Enarson, D.A., and Grzybowski, S.
"Incidence of Active Tuberculosis in the Native Population of Canada", Canadian Medical Association Journal, (May, 1986), 134 (15), 1149-1152.

We analyzed the incidence rates of active tuberculosis reported between 1970 and 1981 in three groups of people born in Canada: Inuit, registered Indians and others (mainly of European origin). While the rates of tuberculosis were quite low in the last group, which constitutes about 82% of the population of Canada, they were 16 times higher among Indians and 24 times higher among Inuit. Some 20 to 30 years ago the Inuit had the highest recorded rate of tuberculosis in the world; with an intensive program the rate decreased sharply. Such a program has not been implemented among the Indian population, and the incidence rate has not decreased as rapidly. A major effort is required to satisfactorily control tuberculosis among Indians. In addition, we must not allow our efforts to slacken in the contol of tuberculosis among the Inuit.

Evers, S.E. and Rand, C.G.
"Morbidity in Canadian Indian and Non-Indian Children in the First Year of Life", Canadian Medical Association Journal, (February, 1982), 126 (3), 249-252.

A cohort study of health status was undertaken to determine the patterns of morbidity in the first year of life for Indian and non-Indian infants living in southern Ontario. The annual incidence of office-reported health problems was 8.0 episodes for the 99 Indians and 4.5 for the 316 non-Indians studied. The risk of illness of most

diagnostic categories was more than 1.5 times greater and the rate of hospital admission 4 times greater for the Indian infants.

There was no difference between the two cohorts in the rates of visits to hospital emergency departments. The main cause of illness in both cohorts was respiratory tract infection; lower respiratory tract infections, particularly pneumonia, were a major health problem among the Indian infants. Only 37% of the Indian infants compared with 68% of the non-Indian infants attended five or more well-baby examinations. Part of the difference in morbidity between the Indian and non-Indian infants may be attributed to environmental factors, health care behaviour and geographic constraints.

Fritz, W. and D'Arcy, C.
"Comparisons: Indian and Non-Indian Use of Psychiatric Services",
Canadian Journal of Psychiatry, (April, 1982), 27 (3), 194-203.

Major differences were found between the Saskatchewan Indian and non-Indian populations in regard to the prevalence of psychiatric disorders, their rates of treatment and the mix of impatient and outpatient services they receive. Diagnostic and treatment differences between the two populations were more pronounced in the "private" than in the "public" treatment sector. These findings are discussed in relation to demographic, socio-economic and cultural differences between Indian and non-Indian populations and to size and organizational differences between the "public" and "private" treatment sectors.

Gillum, R.F., Prineas, R.J., Palta, M., and Horibe, H.
"Blood Pressure of Urban Native American School Children",
Hypertension, (November-December, 1980), 2 (6), 744-749.

In 307 Native American (NA), 1784 black (B), and 7777 white (W) children in grades 1, 2, and 3 in Minneapolis schools (99% overall response rate), blood pressure (BP) was measured supine in the right arm after 5 minutes' rest by trained technicians using a random zero BP device. In addition, height, weight, pulse rate, and triceps skinfold thickness were measured. Among children aged 6 through 9 years, NA children had slightly higher systolic BP (SBP) than B or W children overall (mean SBP: NA 106, B 104, W 105 mm Hg) and for nearly all age sex groups. In contrast, Phase 4 and 5 diastolic BP (DBP) were consistently lower in NA children (mean DBP4 : NA 64, B 69, W 67 mm Hg); NA children also had lower pulse rates, greater pulse pressures, similar or slightly lower mean BP, similar height, greater weight, body mass index, and triceps skinfold. Multiple regression analyses revealed that the slightly higher SBP in NA children was explained almost entirely by greater ponderosity. However, the lower DBP could not be explained statistically by any of the variables measured (Hypertention 2: 744-749, 1980).

Hagey, R.
"The Phenomenon, the Explanations and the Responses: Metaphors Surrounding Diabetes in Urban Canadian Indians", Social Science And Medicine, (1984), 18 (3), 265-272.

Type II Diabetes is a growing problem among Indian people in Canada. Ojibway and Cree leaders in Toronto collaborated with the University of Toronto, Faculty of Nursing, to develop the Native Diabetes Preogram. A key to the success of the program was seen by Natives to be the story 'Nanabush and the Pale Stranger,' which seemed to put into perspective the nature of diabetes as a phenomenon. It provided explanations for it and answered numerous questions (non-biological) associated with the disease and indicated appropriate coping strategies. Yet formal methods of analyzing the story would not reveal its benefit as there is no explicit reference to many of the questions it implicitly answers. Metaphoric relationships are illuminated which may provide an underlying rationality to the narrative. Cultural expression is advocated as a source of making meaningful and tolerable that which is feared and avoided; of generating metaphors which make health information understandable and useful, by providing resolutions to conflicting systems of belief. Information does not come in discreet ingestible particles of fact. All information is a sort of propaganda in that it is tied to deeper meaning structures. Clinicians are architects of meaning construction. Clinical research and practice requires a knowledge of the folk and professional construction of meaning around so-called factual information.

Hoy, W.E., Megill, D.M., and Hughson, M.D.
"Epidemic Renal Disease of Unknown Etiology in the Zuni Indians", American Journal of Kidney Diseases, (July, 1987), 9 (6), 485-96.

An epidemic of renal disease is occurring among the Zuni Indians in western New Mexico. In 1985, 1.6% of Zunis had clinically recognized renal disease and 1% had renal insufficiency. The incidence of end-stage renal disease (ESRD) in 1984 and 1985 was 14 times the rate for US whites, and three times the rates of other Indians in ESRD network 6. One third of the cases of renal disease and ESRD is due to type 2 diabetes, but the etiology of disease in most of the remainder is unknown. Affected subjects range from early childhood to old age.

Early signs are hematuria, mild to moderate proteinuria, normal BP, and low total hemolytic complement, normal or low C3 and C5 levels, in about 40% of the cases. The clinical course varies from benign to rapidly progressive renal failure. Biopsies usually reflect an immune-complex mediated mesangiopathic glomerulonephritis, with IgA, IgG, IgM, and C3 variably present in the mesangium. In some cases, there is a very strong familial pattern suggesting autosomal dominant inheritance or a marked communal exposure effect. This may be a genetic disease educed by the consanguinity in the ethnically homogeneous Zuni population. Mesangiopathic renal disease is common in some Oriental populations, and this phenomenon may reflect the American

Indians' Oriental ancestry. This disease may also be due to toxic exposures related to jewelry-making, potting, Zuni water, Zuni salt, or herbal or other products used for medicinal or religious purposes. This epidemic is creating much morbidity and generating huge costs for ESRD treatment. Further study is needed to better understand its etiology.

Hunter, K.I, Linn, M.W., and Stein, S.R.
"Sterilization Among American Indian and Chicano Mothers", International Quarterly of Community Health and Education, (1983-84), 4 (4), 343-352.

In a large study concerning family size and birth control among women from five cultures in the Miami, Florida, area, it was noted that 60 percent of the Miccosukee and Seminole Indians having five or more children were surgically sterile. Compared with the incidence for whites (30%) and a similar socio-economic group of Chicanos (20%), the incidence among Indian women seemed highly inflated. To examine why this should be so and whether or not there were negative effects of such sterilization, analyses examined both pre- and post-operative differences between the Indians and a comparison group of Chicanos. Though there were significant cultural differences found for the women, these differences did not interact significantly in predicting complications. Factors which may have contributed to the greater incidence of tubal ligation among Indian women are explored.

Lang, G.C.
"Diabetics and Health Care in a Sioux Community", Human Organization, (1985), 44 (3), 251-260.

Native American populations are increasingly being confronted with higher prevalence rates of chronic conditions, sometimes referred to as "diseases of modernization," such as obesity, diabetes, hypertension, and coronary artery disease. Diabetes mellitus (Type II) has emerged during the past four decades as a major health concern. Compliance with diabetic therapeutic regimens is difficult for all diabetics (cf. Edkerling and Kohrs 1984). In Native American communities, it is important for non-Native American health workers to obtain an understanding of the social traditions and cultural meanings of behaviors that will be affected by therapeutic regimens. This paper examines perceptions of diabetes and prescribed therapeutic regimens by diabetics and their families in a Sioux community. Views on foods, diet, and the dietary change that has occurred over the past century and a half may help explain patients' acknowledged low compliance with diabetic diets. A distinction is made between "way back" foods and contemporary "Indian foods." Social and symbolic aspects of present-day food-ways may be drawn upon by dieticians and health workers to promote awareness of the potential benefits of lower-calorie diets. The roles of a recent Diabetes Program at the Indian Health

Service Clinic and of the Tribal Health Office are considered with respect to developing community-based health objectives.

Leonard, B., Leonard, C., and Wilson, R.
"Zuni Diabetes Project", Public Health Reports, (May-June, 1986), 101 (3), 282-288.

Widespread type II diabetes among North American Indians and certain other populations is a relatively recent medical phenomenon. Increased prevalence of diabetes appears to be related to sudden cultural shifts toward sedentary lifestyle and increased caloric intake. These changes, super-imposed on a genetic predisposition to diabetes, pose a community health threat to the Zuni and similar populations.

Regular aerobic exercise is clearly beneficial to most type II diabetics. The key public health issue is how to establish community participation in effective aerobic activity. The Zuni Diabetes Project, fully described here, serves as a model in this respect.

Longstaffe, S. Postl B., Kao, H., Nicolle, L., and Ferguson, C.A.
"Rheumatic Fever in Native Children in Manitoba", Canadian Medical Association Journal, (September, 1982), 127, 497-498.

From data reported to a central computer file, cases of rheumatic fever in persons under 17 years of age in Manitoba were reviewed. Although the overall incidence of the disease declined throughout the study period, Jan. 1, 1970 to July 1, 1979, the rates per 100,000 population were higher overall (36) and for non-natives (29) and much higher for natives (126) than average rates in urban centres around the world. Rates of death and readmission showed that the disease was also more severe in the native Manitoba children.

Lum, M.K.W.
"Decline in Infant Mortality of Alaska Yupik Eskimos from 1960 to 1980", Public Health Reports, (May-June 1986) 101 (3), 309-314.

A 1960-62 study of southwestern Alaskan Eskimos documented an infant mortality rate of 102.6 deaths per 1,000 live births, four times greater than that of U.S. whites. In 1980-81, 20 years after the original study, a similar cohort was identified in this population so that changes in infant mortality and other birth characteristics could be examined.

Average birth weight and the amount of prenatal care received by the mothers increased from 1960 to 1980. Birth weight and prenatal visits were positively correlated. Results of the followup also revealed a 1980-81 infant mortality rate--17.1 deaths per 1,000 live births--that

was less than a fifth of the 1960-62 rate and no longer significantly different from the national rate. Major changes associated with the decrease in mortality during the first 28 days of life (neonatal mortality) were a significant increase in the proportion of infants born in hospitals and an associated decrease in the number of deaths of infants weighing less than 2,500 grams at birth. The reduction in mortality during the rest of the first year of life was related to a decrease in deaths due to infectious diseases, particularly measles and pertusis. Changes in infant mortality reflect the increased availability of health care in this region, improved immunization programs, and the establishment of the Bethel Prematernal Home in Bethel, AK.

Manson, S.M., Walker, R.D., and Kivlahan, D.R.
"Psychiatric Assessment and Treatment of American Indians and Alaska Natives", Hospital And Community Psychiatry, (February, 1987), 38 (2), 165-173.

It is widely recognized that the cultural uniqueness of American Indians and Alaska Natives must be reflected in the methods of diagnosing and treating their mental health problems, but empirical validation of specific diagnostic instruments and treatment has been slow in coming. The authors' literature review indicates that many standardized self-rating scales and interview schedules can accurately assess mental illness among Indians, provided they are modified to reflect cultural heritage and experiences. Group therapy is increasingly chosen as a psychiatric treatment for American Indians, as are family-network therapy and several traditional Indian therapies. The authors also review the demographics and psychiatric epidemiology of American Indians and Alaska Natives.

Marburg, G.S.
"Mental Health and Native American: Responding to the Challenge of a Biopsychosocial Model", White Cloud Journal of American Indian Mental Health, (1983), 3 (1), 43-52.

The mental health needs of Native Americans have long been neglected in the professional psychological and psychiatric literatures. Here described is a rural hospital based community mental health program that utilizes an array of remedial, developmental, and preventive strategies to respond to this population's unique biopsychosocial needs. Since outpatient, outreach, and aftercare programs also play a critical role in a comprehensive mental health program, they are discussed from a general systems theory orientation. From this perspective, the development of treatment and consulting networks is essential to provide a full spectrum of mental health services to Native Americans in rural areas.

McShane, D.
"Mental Health and North American Indian/Native Communities: Cultural Transactions, Education and Regulation", American Journal of Community Psychology, (1987), 15 (1), 95-116.

Critical issues in the delivery of mental health services to North American Indians/Natives residing in rural areas are discussed by (a) describing Indian populations/communities; (b) briefly summarizing available literature concerning the nature of mental health problems within Indian communities; (c) examining Indian belief systems relevant to participation in mental health service delivery processes; (d) exploring community expectations for structuring participatory interactions which may inhibit utilization of mental health services; and (e) describing transactions between Indian consumers and non-Indian professionals which have become typical over time. The rural context was examined as it interacts with individual and community characteristics to affect Indian mental health. Relations between geography and culture, important in understanding the mental health problems of Indian people, are discussed in regard to expanding community healing resources through empowerment, and viewing "education as transformation" as a key concept in enhancing community healing processes.

Navajo Area Indian Health Service
Navajo Area Mortality Report for 1978. (Window Rock, AZ: Indian Health Service, 1980.)

This report provides basic data on Navajo vital events. The data is obtained from birth and death certificates. Vital Statistics are based on community of residence. IHS uses National Center for Health Statistics tapes to produce tabulations by Area and Service Unit of residence. Population for the denominators is estimated annually by IHS, Office of Program Statistics in Rockville. The population estimated is Navajos living on or near the Navajo reservation. Navajos living in Albuquerque or Flagstaff, for example, are presumably not included.

Petersen, L.P., Leonardson, G., Wingert, R.I., Stanage, W., Gergen, J., and Gilmore, H.T.
"Pregnancy Complications in Sioux Indians", Obstetrics and Gynecology, (October, 1984), 64 (4), 519-523.

The poor health status of Sioux Indians residing on reservations in South Dakota has been recognized for many years. The present report documents evidence of a high incidence of socioeconomic health-related disorders and pregnancy-related complications by comparing 342 pregnant white women and 405 pregnant Sioux Indian women. In collaboration with

the Aberdeen Area Indian Health Service, beginning in 1976, a program was initiated to identify, assess risks, and provide patient management for pregnant Sioux Indians. This prenatal consultative program has proven effective in the reduction of fetal and infant mortality.

Red Horse, J.
"Clinical Strategies for American Indian Families in Crisis", The Urban and Social Change Review, (1982), 15 (2), 17-19.

American Indian family systems, particularly from the standpoint of family violence, child neglect, and substance abuse, are the subject of much debate, and questions about the effect of cultural norms and cultural differences in family conduct on the identification and treatment of these problems have been raised. These topical debates were extremely vital prior to the passage of the Indian Child Welfare Act of 1978. They launched advocacy efforts to revise social and cultural practices in child welfare institutions that were detrimental to American Indian family systems.

Subsequent to the passage of the act, cultural issues must be considered in the design of implimentation strategies, and treatment procedures are needed that respect and reinforce the structural and cultrual integrity of Indian and extended family systems. Essentially, practitioners must now address points of fusion that will meld Indian tradition with effective mental health practices. This article offers a strategy of cultural fusion adaptable to a broad spectrum of Indian family types. Moreover, as a cultural strategy, it is congruent with the fabric of Indian communities and aspirations of cultural pluralism considered vital by Indian constituencies. Discussion of cultural fusion will highlight two sets of ideas: (1) a strategy for organization and (2) principles of clinical service.

Rhoades, E.R., Marshall, M., Attneave, C., Echohawk, M., Bjork, J., and Beiser, M.
"Impact of Mental Disorders Upon Elderly American Indians as Reflected in Visits to Ambulatory Care Facilities", Journal of the American Geriatrics Society, (January, 1980), 28 (1), 33-38.

In order to assess the impact of mental health problems among elderly American Indians, a study was conducted on the utilization patterns of ambulatory care facilities by various age groups of Indians. Since most health care of Indians is rendered by the Indian Health Service (IHS), data obtained from IHS computer centers provided a reasonable index of disease patterns. Because the elderly have constituted such a small fraction of the Indian population, they have not heretofore received significant attention. However, their problems are rapidly increasing. By adjusting the frequency of visits according to population, an estimate of visit "rates" was made. These rates showed one visit for every 10 persons in the 0-44 age group, one for every 5

persons in the 45-54 age group, but only one visit for every 25 persons in the 65+ age group. Most of the visits by older Indians concerned "social" problems rather than "mental" disorders as such. These data provide information that should prove especially helpful in the design of social and health programs for elderly Indians.

Samet, J.M., Kutvirt, D.M., Waxweiler, R.J., and Key, C.R. "Uranium Mining and Lung Cancer in Navajo Men", New England Journal of Medicine, (1984), 310 (23), 1481-1484.

We performed a population-based case-control study to examine the association between uranium mining and lung cancer in Navajo men, a predominantly nonsmoking population. The 32 cases included all those occurring among Navajo men between 1969 and 1982, as ascertained by the New Mexico Tumor Registry. For each case in a Navajo man, two controls with nonrespiratory cancer were selected. Of the 32 Navajo patients, 72 percent had been employed as uranium miners, whereas no controls had documented experience in this industry. The lower 95 percent confidence limit for the relative risk of lung cancer associated with uranium mining was 14.4. Information on cigarette smoking was available for 21 of the 23 affected uranium miners; eight were nonsmokers and median consumption by the remainder was one to three cigarettes daily. These results demonstrate that in a rural nonsmoking population most of the lung cancer may be attributable to one hazardous occupation.

Shaw, J.R., Todd, N.W., Goodwin, M.H., Jr., and Feldman, C.M. "Observations on the Relation of Environmental and Behavioral Factors to the Occurence of Otitis Media Among Indian Children", Public Health Reports, 1981, 96 (4), 342-349.

Otitis media and associated adverse sequelae are a leading cause of morbidity among American Indians. Rates of acute infection and hearing loss are reported to be considered higher than among the general U.S. population. Such differences have not been explained adequately, although a variety of factors have been examined. The work reported here was undertaken in connection with a study of the epidemiology and methods for controlling otitis media among four Indian populations living on reservations in Arizona. In this report, we present an evaluation of the association of some environmental and behavioral factors with the occurrence of otitis media.

Shen, W.W.
"The Hopi Indian's Mourning Hallucinations", Journal of Nervous and Mental Disease, (June, 1986), 174 (6), 365-367.

One of the 76 alcoholic patients with hallucinations studied in an inpatient alcoholism service was a 24-year-old half-Hopi Pueblo Indian male, who developed a prolonged course of hallucinations after the death of his father. The author suggests that hallucinating experiences might be pathognomy-specific to the Hopi Indians' mourning process, to allow the release of their intensive feelings.

Spaulding, J.M.
"The Canton Asylum for Insane Indians: An Example of Institutional Neglect", Hospital And Community Psychiatry, (October, 1986), 37 (10), 1007-1011.

Based on archival data, the author chronicles the history of the Canton (S.D.) Asylum for Insane Indians, which was established by Congress in 1903 and was closed in 1934 because of inadequate conditions. In 1926 a nationwide survey found that patients at Canton received minimal care. The rates of patient death and discharge at Canton reported in a 1931 survey compared unfavorably to those at other mental institutions in the U.S. The 1929 and 1933 inspection reports of psychiatrist Samuel Silk, which documented the hospital's outmoded custodial care and questioned the necessity of institutionalization for 35 to 40 of Canton's 90 patients, played a key role in the decision to close the asylum. The author attributes the decline of the Canton Asylum to gradual neglect by its superintendent and various government agencies.

Spaulding, J.M. and Balch, P.
"Perceptions of Mental Disorder of Yaqui Indians in Arizona: An Initial Investigation", White Cloud Journal, (1985), 3 (4), 19-26.

This study was disigned to provide an initial research effort for the Yaqui Indians of Arizona. The investigation sought to determine whether specific behavior patterns would be labeled by Yaquis as describing mental problems, using the Star (1955) vignettes. Three Tucson-area Yaqui communities with 81 Yaquis responded to the survey. Results evidence areas of overlap and divergence with previous studies. Implications for mental health service providers for Yaqui patients in terms of their perception of women who might be labeled as "schizophrenic" by the dominant culture, as well perceptions towards alcoholism, are raised by the findings. Finally, important interviewer effects were found suggesting that Yaquis are more reticent about mental health issues when discussing them with Anglos than when discussing them with other Yaquis.

Sullivan, D.A. and Beeman, R.
"Utilization and Evaluation of Maternity Care by American Indians in Arizona", Journal of Community Health, (Fall, 1983), 9 (1), 18-29.

Drawing upon a statewide consumer survey conducted in 1979 by the Bureau of Maternal and Child Health, this report focuses on the health service utilization and evaluation of 110 American Indians. The data shows that Indians, in contrast to Anglos, have less prenatal care, a higher incidence of transport to special care facilities, a higher incidence of newborn problems, and unusually high rates of early and late discharge. The Indian women also reported a higher incidence of communication problems with their caretakers and were less satisfied with the care that they received. The discussion considers the problems of less continuity of care and personnel shortages as well as cultural differences for delivering the quality of care mandated by treaty and subsequent laws to this impoverished minority group.

Temkin-Greener, H., Kunitz, S.J., Broudy, D., and Haffner, M.
"Surgical Fertility Regulation Among Women on the Navajo Indian Reservation, 1972-1978", American Journal of Public Health, (April, 1981), 71 (4), 403-407.

Changes in the rates of induced abortions, bilateral tubal ligations, and hysterectomies on the Navajo Indian Reservation have been examined for the years 1972-1978. While the incidence of abortions and tubal sterilizations is still considerably lower among Navajo women than among the total United States population of women, it has risen, especially among those in the prime of the reproductive cycle, i.e., ages 20-34. The rate of hysterectomy has not changed substantially. Regression analyses performed on the data indicate that the utilization of surgery for fertility regulation in women on the Navjo Reservation, unlike other surgical procedures, is not affected by access to hospitals which provide surgery. Rather measures of involvement in the wage work economy are of a primary importance. Those areas of the Reservation having the highest levels of such involvement exhibit the highest rates of such surgery.

Timmermans, F., Gerson, S.
"Chronic Granulomatous Otitis Media in Bottle-Fed Inuit Children", Canadian Medical Association Journal, (1980), 122, 545-547.

Otitis media in Inuit children is a problem of relatively recent origin and unknown cause. The prevalence of otitis media in 238 Inuit and 47 Caucasian children in Nain, a small community in Labrador, was determined by examination, and the history of breast-feeding or bottle-feeding was obtained. The prevalence of otitis media was found to be inversely related to the age bottle-feeding was started.

Clinical observations suggest that otitis media in Inuit children is part of a process leading to chronic foreign body granuloma of the middle ear, and that the granuloma is formed from milk introduced into the relatively short and straight eustachian tubes of Inuit infants by the high negative intraoral pressure necessary for bottle-feeding.

Timpson, J.B.
"Indian Mental Health: Changes in the Delivery of Care in Northwestern Ontario", Canadian Journal of Psychiatry, (April, 1984), 29 (3), 234-241.

For ten years University of Toronto psychiatrists have made regular visits to isolated Indian villages in remote Northwestern Ontario, offering a clinical psychiatric program. Initially, two non-Indian social workers provided ongoing service between the psychiatric visits. Recognizing the difficulty in providing psychotherapy cross-culturally, the members of the treatment team developed the skills of local persons who were not formally trained in the treatment of mental health problems. The paper describes a significant shift in the psychiatric program beginning in 1981. At that time in certain communities local people took over the service, resulting in an increased ability to provide a preventative psychiatric program. Community based workers have dealt more with early marital difficulties, grief reactions, transitional depressive states, and less with major mental illnesses. In the areas which have community based treatment teams, the emphasis in psychiatric service is shifting from direct clinical work to formal teaching and case consultations with the indigenous counsellors. The evidence indicates optimism that the service is reaching more persons before the emergency stage than it did in previous years of the program.

Williams, R.
"Meningitis and Unpaved Roads", Social Science And Medicine, (1987), 24 (2), 109-115.

Access to health care may be influenced by a variety of factors including ones attributable to the individual as well as ones attributable to the health care system. One category frequently referred to is 'geographic' factors of distance and travel time. In the present study, a previously undescribed geographic factor--unpaved roads--is shown to be a clinically important barrier to access. Using a case-control format, children admitted with bacterial meningitis are shown to have traveled farther over unpaved roads to get to a clinic than matched controls seen at the same time. With control groups matched for age and similar pre-existing illness, the implication is that unpaved roads resulted in increased morbidity by reducing access.

Williams, R.L.
"Vehicular Carbon Monoxide Screening: Identification in a Cross-Cultural Setting of a Substantial Public Health Risk Factor", American Journal of Public Health, (January, 1985), 75 (85), 85-86.

A community program of screening and education for prevention of vehicular carbon monoxide (CO) poisoning among a high risk population in a cross-cultural setting is presented. The program was developed after two infants deaths in separate incidents of vehicular CO poisoning. The results of the screening show 18.6 percent of vehicles exceeding the Environment Protection Agency eight-hour standard for CO exposure, and 2.6 percent exceeding the one-hour standard. Extension of such programs to other high risk populations is recommended.

Wolfe, M.D. and Carlos, J.P.
"Periodontal Disease in Adolescents: Epidemiologic Findings in Navajo Indians", Community Dental Oral Epidemiology, (1987), 15 (1), 33-40.

A cross-sectional epidemiologic survey was conducted of 618 Navajo Indians, aged 14-19, resident in a boarding school in New Mexico. Periodontal status was assessed by clinical measurements of attachment level and gingival bleeding, and evidence of alveolar bone loss from standardized bitewing radiographs. Attachment level and gingival bleeding were measured at 24 posterior interproximal sites (six sites in each quadrant): the mesio-buccal aspect of the second molar; the disto-buccal and mesio-buccal aspects of the first molar and second premolar; and the disto-buccal aspect of the first premolar. Alveolar bone level was measured from radiographs at the corresponding approximal surfaces of the same teeth. Attachment loss was considered present when the distance from the CEJ to the base of the pocket was > 1 mm; bone loss was considered present when the radiographic distance from the CEJ to the alveolar crest was > 2 mm, and gingival bleeding was considered present if bleeding occurred immediately after gentle probing. Attachment loss was evident at one or more sites in 88.6% of the population. 45.9% of the subjects had attachment loss at eight or more sites, and 101 subjects (16.3%) had one or more sites with at least 4.0 mm of attachment loss. Bone loss was present at one or more sites in 89.2% of the population, 28.6% had eight or more affected sites, and 4.7% (29 subjects) had one or more sites with at least 2.0 mm of bone loss. Gingival bleeding was evident at one or more sites in 70.6% of the population, and 19.7% had eight or more affected sites. None of the conditions were strongly associated with sex, but the prevalence of bone loss increased with age. The prevalence and severity of incipient periodontitis seemed much higher in these subjects than previously reported in other adolescent groups when similar diagnostic criteria and methods of measurement were used.

Wolfe, M.D. and Carlos, J.P.
"Oral Health Effects of Smokeless Tobacco Use in Navajo Indian Adolescents", Community Dental Oral Epidemiology, (August, 1987), 15 (4), 230-235.

Recent reports have suggested that the use of smokeless tobacco is increasing in adolescents, and is particularly high in Native Americans, causing concern about possible effects on oral health. In this study, 226 Navajo Indians, aged 14-19, were interviewed regarding their use of smokeless tobacco (ST), cigarettes, and alcohol.

Midbuccal and mesiobuccal sites on all fully erupted permanent teeth (excluding the third molars) were examined for the presence of gingival bleeding, gingival recession, calculus, and loss of periodontal attachment. The oral mucosa was examined for evidence of leukoplakia. 64.2% (145) of the subjects (75.4% of the boys and 49.0% of the girls) were users of ST. Of these, over 95% used snuff alone or in combination with chewing tobacco. 55.9% used ST one or more days per week. 52.2% consumed alcohol, usually beer or wine, and 54.0% smoked cigarettes. 25.5% (37) of the users and 3.7% (3) of the non-users had leukoplakia. The duration (in years) and frequency of ST use (days per week) were highly significant risk factors associated with leukoplakia. However, the concomitant use of alcohol or cigarettes did not appear to increase the prevalence of these lesions. No consistent relationship was observed between the use of ST and gingival bleeding, calculus, gingival recession, or attachment loss, either when comparing users to non-users or when comparing the segment where the tobacco quid was habitually placed to a within-subject control segment. In view of these results, there is little doubt that smokeless tobacco is significantly related to the etiology of leukoplakia. As some evidence exists that smokeless tobacco use is a significant risk factor associated with oral carcinoma, intervention programs to discourage the use of smokeless tobacco by adolescents should be a public health priority.

Young, T.K.
"Self-Perceived and Clinically Assessed Health Status of Indians in Northwestern Ontario: Analysis of a Health Survey", The Canadian Journal of Public Health, (July-August, 1982), 73, 272-277.

This paper reports on a community health survey (interview and clinical examination) among Indian residents in a region of remote isolated settlements in northwestern Ontario. Prevalence rates were established for certain health problems and the discrepancy between perceived and clinically determined health status was highlighted.

Young, T.K.
"Mortality Pattern of Isolated Indians in Northwestern Ontario: A 10-Year Review", Public Health Reports, (September-October, 1983), 98, 467-475.

The mortality experience of an isolated Indian population in the Sioux Lookout Zone of northwestern Ontario from 1972 through 1981 is reviewed and compared with that of the Canadian population. Standardized mortality ratios for major categories of causes computed showed excessive risks in most conditions. Notable exceptions included circulatory diseases and neoplasms. Injuries and poisonings accounted for more than one-third of deaths. The proportionate mortality and age-specific mortality rates were considerably higher in all age groups in the Sioux Lookout Zone than in the whole of Canada. Excessive risks were found in almost all categories of accidental and violent deaths except motor vehicle accidents and accidental falls. Local conditions that contributed to the pattern observed are discussed. More than 90 percent of deaths from accidents and violence occurred before the medical care system was involved, highlighting the need for primary preventive strategies in reducing mortality due to these causes.

While the infant mortality rate declined, pneumonia, gastroenteritis, and meningitis still accounted for 28 percent of infant deaths in the decade. Even with sudden infant death syndrome excluded, about 25 percent of infant deaths still occurred at home. Some features of the pattern of mortality reported here are also observed in other North American Indian groups undergoing the stresses of social change.

Young, T.K., and Hershfield, E.S.
"A Case-Control Study to Evaluate the Effectiveness of Mass Neonatal BCG Vaccination Among Canadian Indians", American Journal of Public Health, (July, 1986), 76 (7), 783-786.

This paper reports a case-control study to assess the protective effect of BCG (bacille Calmette-Guerin) vaccination among Indian infants in Manitoba, Canada. A record of past BCG vaccination was found in 49 per cent of the tuberculosis cases, compared to 77 per cent of the controls, yielding a relative risk of 0.30. Stratified analysis, controlling for age, increased the relative risk to 0.39 (95% confidence interval 0.22 - 0.69). The preventive fraction was 44 per cent. Non-differential misclassification of exposure status could have occurred; if this was adjusted for, the relative risk would be reduced. If only bacteriologically confirmed cases were analyzed, the age-adjusted relative risk was 0.27. The protective effect of BCG vaccination in the newborn among Manitoba Indians is therefore at least 60 per cent. The implications for health policy in this population are further discussed.

Zeiner, A.R., Girardot, J.M., Jones-Saumty, D., and Nichols, N. "Prevalence of ALDH I Isoenzyme Among American Indians in Oklahoma", Arukuro Kenkyuto Yakubutsu Ison, (December, 1985), 20 (4), 359-366.

Data developed primarily on Asian populations suggest that alcohol use and misuse may, in part, be modulated by absence of the ALDH I isoenzyme, a comcomitant increase in acetaldehyde (implicated in some of the toxic effects ascribed to alcohol; 28,35) for an acute alcohol dose, and resultant dysphoric effects. The present study explored the generality of these related hypotheses in 51 North American Indians and 8 Caucasian controls via hair root assays for prevalence of the ALDH I isoenzyme and amount of absolute ethanol consumed per day in ALDH I isoenzyme-positive and isoenzyme-negative groups. Our Caucasian control data replicated previous findings. Prevalence of ALDH I isoenzyme deficiency in North American Indians (13.7%) differs significantly from previously published data on South American Indians (69%). It also differs significantly from Asian data (35-57%). North American Indian data are similar to Asian data in showing that ALDH I isoenzyme-deficient North American Indians also drink less alcohol than do non-deficient Indians. Further, family history of alcoholism is less (28%) in ALDH I isoenzyme-deficient American Indians than in those without the deficiency (84%). However, unlike Asians, American Indians with the isoenzyme deficiency still drink more alcohol per day than do Caucasian controls. Results have implications for increased toxic effects as well as increased risk for alcoholism.

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ABSTRACTED CITATIONS

Beiswenger, J.N.
Indians into Medicine. (Grand Forks: University of North Dakota Medical School, 1985).

Located at the University of North Dakota School of Medicine, Indians into Medicine (INMED) is a multi-faceted program providing academic, financial, and personal support for Indian students preparing for health careers. The program has the following goals: (1) increase awareness and motivation among Indian students with the potential for health careers; (2) enroll students in the proper curriculums; (3) provide support needed for successful academic achievement; (4) develop academic programs to enhance Indian health care; and (5) place Indian health professionals in service to Indian communities. INMED's summer institute---for Indian students at junior high and high school, college and pre-med levels---provides academic enrichment sessions along with field trips, recreation, pow-wows, and Indian awareness workshops.

Full-year academic programs are available at any undergraduate or graduate level, and INMED helps students obtain scholarships and other financial aid. Support services include counseling and advisement, a learning resource center, tutorial assistance, a student organization, field work experiences, and seminars on specific Indian health issues. This brochure, prepared for prospective INMED participants, includes addresses and phone numbers for those wishing to apply or obtain further information.

Beiswenger, J.N. and Jeanotte, H., (Eds.)
Medicine Women. (Grand Forks: University of North Dakota Medical School, 1985).

Described as a survival manual for Indian women in medicine, this collected work contains diverse pieces offering inspiration and practical advice for Indian women pursuing or considering careers in medicine. Introductory material includes two legends symbolizing the medicine or spirit women's role in Indian culture and an overview of Indians into Medicine (INMED) including the participation of women in the program. Chapter 2 reviews the role of Indian women in history, emphasizing their heritage of equal status and leadership in tribal governments. In chapter 3, Lois Steele, M.D., writes a personal narrative about the pros and cons of medical school and work as a physician. Chapter 4 presents short biographies of Susan La Flesche-Picotte and Lilian Rosa Minoka Hill, the first American Indian women physicians in the United States. Chapter 5-8 discuss stereotypes

that affect Indian women pursuing professional careers, experiences of individuals who have succeeded in medical school, and child rearing concerns of Indian parents leading non-traditional lives. Chapter 9 presents spiritual advice contributed by INMED board member Constance Jackson, and chapter 10 summarizes the accomplishments of several Indian nurses. The final chapter suggests various ways to cope with the stresses of medical school, including discrimination against minorities and women.

Beiswenger, J.N., (Ed.)
American Indian Doctors Today, Volumes One and Two. (Grand Forks: University of North Dakota, School of Medicine, 1982).

The Indians into Medicine program (INMED) presents an additional 44 brief biographies of American Indian health professionals (7 women and 37 men) from 29 different tribal groups, to acquaint young Indian people with potential careers in health professions (four of the biographies appeared in volume one). The biographical sketches contain information on: age; tribal affiliation; early influences toward a medical career; family and educational background; professional career and areas of interest; professional memberships and honors; difficulties, discrimination or racial prejudice encountered; and opinions on health care for Indian people. Medical specializations of those described include: General Medicine (Drs. Allen, Deroin, Parkhurst); Internal Medicine (Drs. Amos, Ignace, Kaur, Pease, Wilson, Work); Family Practice (Drs. Asher, Berretta, Chappabitty, Cook, Jones, Latimer, Livermont, Markert, Poolaw, Steele); Pediatrics (Drs. Avritt, Hardy, Jacobs, Moseley); Psychiatry (Drs. Chicks, Clevenger, Reid, Thompson, Walker); Public Health (Drs. Clarke, Dru); Dentistry (Dr. Claymore); Obstetrics/Gynecology (Drs. Conner, Demeyere, Laroque, Vandall); Preventive Medicine (Dr. Demontigny); Oncology (Dr. Hampton); Teaching (Drs. Hampton, Rhoades); Surgery (Drs. Johansen, Vinson); Veterinary Medicine (Dr. Lyon); Ophthamology (Dr. Meister); Ear, Nose and Throat (Dr. Sciacca); and Orthopedic Surgery (Dr. Whitecloud). Photographs of 29 doctors are provided.

Boyce, W.T. and Boyce, J.C.
"Acculturation and Changes in Health Among Navajo Boarding School Students", Social Science and Medicine, (1983), 17 (4), 219-226.

This paper describes the relationship between cultural background and illness experience among Navajo students during their first year at a reservation boarding school. Sixty Navajo children were enrolled in a 9-month, prospective study in which three descriptors of change in health status were assessed; (a) number of dormitory aide contacts initiated by the child for an illness complaint; (b) psychosocial problems referred to the clinic or to the boarding school administration.

Two measures of cultural background were developed to estimate the location of each child along a continuum of acculturation, ranging from a traditional Navajo cultural orientation to full assimilation into modern Anglo-American society. First, the home communities for all children in the study population were ranked by eleven Navajo informants on an equal-interval scale reflecting community differences in cultural identity. Second, a questionnaire assessing acculturative dimensions of family life style was administered to each child by a Navajo assistant. In addition, each student was assigned a score for cultural incongruity, defined as the degree of absolute difference between community and family measures of cultural background. The reliability and validity of each index of acculturation were confirmed using a variety of psychometric approaches.

Controlling for the confounding effects of age, sex and family size, a significant positive association was found between the number of clinic visits and the degree of cultural incongruity. Boarding school students from families and communities which conflicted in cultural orientation experienced higher rates of clinic visits for illnesses requiring medical attention. This result is discussed in the context of current understandings of the epidemiological consequences of cultural change.

Guilmet, G.M.
"Health Care and Health Care Seeking Strategies Among Puyallup Indians", Cultural Medical Psychiatry, (December, 1984), 8 (4), 349-369.

This study replicated Kleinman's research on family-based popular health care in Taiwan among the Puyallup Indians of Washington. Standardized interviews were conducted among 80 Puyallup families to determine family health practices and beliefs, and the patterns of referral to professional practitioners. Comparisons are made between the Puyallup and Taiwanese family health care practices and health care seeking processes. The author concludes that the relative absence of folk medicine and the availability of free medical care among the Puyallup are the most important factors causing the variance between the rates of family treatment and the patterns of health care seeking behaviors between the Puyallup and the Taiwanese.

Hatcher, M.E., Helmick, E., and Longie, K.C.
"Effects of Governmental Health Policies in Determining the Size of a Hospital at Chinle in the Navajo Indian Reservation", Socio-Economic Planning Sciences, (1980), 14 (5), 233-236.

This paper discusses the effect of government health policies on determining the size of a hospital at Chinle on the Navajo Reservation. The local residents and professional involvement and how they responded to these policies is discussed throughout the paper.

Indian Health Service (IHS) provides health care to 720,000 Native American and Alaskan Native people. With the passage of Public Law 94-437, the Indian Health Care Improvement Act, IHS was given a clearer legal mechanism for providing funds for services and facility construction. The Chinle Service Unit, on the Navajo Reservation, did not have a hospital and could be provided one under Public Law 94-437. The question is should they build a hospital at all and how large a hospital is needed?

Mayfield, M.I. and Davies, G.
"An Early Intervention Program for Native Indian Infants and Their Families", The Canadian Journal of Public Health, (November-December, 1984), 75, 450-453.

The Native Program is a home-based, multidisciplinary program for Native children through four years of age on five reserves on Vancover Island. The overall goals of the program are the early correction of departures from good health, provision of education, and prevention of social problems through an early intervention program which combines traditional cultural and present child-rearing practices. The program provides children with experiences and services which enhance their early development by encouraging and helping parents to develop skills necessary to provide meaningful experiences for their children. We describe the establishment of the program, the training of Native women as infant workers, program content, and evaluation results.

Rogers, K.D. and Coulehan, J.L.
"A Community Medicine Clerkship on the Navajo Indian Reservation", Journal of Medical Education, (December, 1984), 59 (12), 937-943.

An elective clerkship in community medicine for medical students has been conducted for 16 years on the Navajo Indian reservation. An important part of the clerkship is a project in which most students select a health problem which they investigate using epidemiological methods of assessment and for which they seek a solution. The requisites for the projects are that real health problems are involved, scientifically sound methods are used, usable information is provided, and data collection can be completed within the clerkship tenure. Topics for the projects are selected jointly by the students and the faculty members from several general subject area; this allows the work of individual students to be carried out as independent subprojects of larger projects, and this, in turn, produces more information about and has more impact on the problems addressed. Other clerkship objectives also are achieved through investigative projects that may involve students in planning, organization, and evaluation of health care and in public health practice.

U.S. Senate Select Committee on Indian Affairs
"Indian Health Service Oversight and Reauthorization of Indian Health Care Improvement Act". Hearing before the Select Committee on Indian Affairs, U.S. Senate, 96th Congress, Second session.

The transcript of the March 28, 1980, Senate hearing on the Indian Health Service (IHS) and reauthorization of the Indian Health Care Improvement Act (Public Law 94-437) held in Billings, Montana, is presented with testimony from the three affiliated tribes in North Dakota, Montana United Indian Association, Montana Indian Health Board, Fort Peck Tribe, Crow Tribe, Omaha Tribe of Nebraska, Northern Cheyenne Tribe, Fort Belknap, Flathead Tribe, and Devil's Lake Sioux Tribe. Testimony is included on Public Law 93-638 (The Indian Self-Determination and Education Assistance Act), various aspects of IHS, indian health services/ facilities/programs, problems of reservation Indians and Montana's urban indians, testimony includes requesting renewed funding for the American Indians into Medicine (INMED) program under title I of Public Law 94-437, which provides for Indian Health Manpower Development. Details are included on INMED, which is based at the University of North Dakota, and serves 22 reservations in North Dakota, South Dakota, Montana, Wyoming, and Nebraska. INMED is described as a program which identifies prospective medical career students from all grade levels and aids them in obtaining an advanced degree in the medical field. Appended are statements from Wind River Arapahoes and the National Urban Indian Council.

University of California-Berkeley School of Public Health
Education Assistance for American Indians and Alaska Natives.
(Berkeley: University of California, School of Public Health, 1986).

Written for students and their parents, this guide focuses on health careers for American Indians and Alaska natives while providing general information about financial support for college education. Material is presented in nine chapters that cover background information on health careers, information and scholarships for medical schools and related health professions, Master of Public Health (MPH) program for American Indians and Alaska natives, Bureau of Indian Affairs Higher Education Grant Program, Title IV grants from the United States Department of Education, tribal scholarships and loans, financial aid from schools, nationwide foundation and organizational support, and alternatives to scholarships. Numerous directories and resource lists are provided including 17 scholarships and 10 loans for minority group students pursuing health careers, 30 medical school with programs for American Indian students, sources of tribal scholarships and loans, and 24 schools of public health in the United States and Canada. The financial aid from school sections gives addresses, contact persons, and types of help available from over 300 colleges and universities with separate native Native American studies centers. The appendix includes a sample letter requesting scholarship information, a sample resume, a worksheet for determining college costs, an application checklist, and general words of advice and encouragement.

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Weiss, L.D., Wiese, W.H., and Goodman, A.B.
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"The Impacts of Alternative Funding Policies for Ambulatory Care Services on Hospitalization in the Indian Health Service Contract Health Care Program in Cordova, Alaska", Alaska Medicine, (April-June, 1985), 27 (2), 31-35.

This study documents the impact of alternative funding policies for ambulatory care services on hospitalization in the Indian Health Service Program in Cordova, Alaska. A longitudinal comparison for 18 months of program performance under each of two policies from April, 1977 to March, 1980 was conducted. Under the enhanced ambulatory care policy both hospitalization and total program expenditures were significantly reduced.

Brod, R.L., May, P. and Stewart, T.
"Recruitment and Retention of Federal Physicians on the Navajo Reservation", The Social Science Journal, (1982), 19 (4), 47-66.

Recruitment and retention of physicians in most rural areas of the United States has been a continuing problem. Special difficulties surround the efforts of the Indian Health Service (IHS) to staff its extensive health care delivery systems on Indian reservations, particularly those of the Navajo. Questionnaire data obtained from IHS physicians practicing on the Navajo Reservation in 1976 are factor analyzed and inferences are drawn regarding recruitment and retention. Particular attention is paid to choice of location factors and areas of job and life satisfaction. Physicians' choice to practice on the reservation was motivated by altruism and the multiple attractions of the Southwestern United States. Once there, physicians' areas of satisfaction center around their relationship with Indian patients and the local community, but dissatisfaction is found in hospital staffing patterns, equipment and other bureaucratic and structural variables. A general retention model is tested in which demographic characteristics, location choice factors, and satisfaction indices are treated as independent variables in a linear regression equation predicting physicians' intention to practice indefinitely among the Navajo. Based on these results, two different types of physicians are described and problems of models predicting retention using only demographic and attitudinal measures are discussed.

Church, R.M.
"Pharmacy Practice in the Indian Health Service", American Journal of Hospital Pharmacy, (April, 1987), 44, 771-775.

The current status of pharmaceutical services in the Indian Health Service (IHS) is described. IHS is a nationwide program for providing health-care services to more than 960,000 American Indians and Alaska Natives who live on or near federal Indian reservations. Because IHS pharmacy practice revolves around the needs of the patient, pharmacists have close and frequent contact with patients and must have an acute sensitivity to and respect for the cultural values and beliefs of the patients. Ambulatory-care services are emphasized; pharmacists often provide primary care to patients and make frequent use of prescribing authority. All prescriptions are filled directly from the patient's permanent health record, and private patient consultation rooms are used extensively. In the inpatient setting, pharmacists obtain medication and related histories from newly admitted patients and provide patient counseling at the time of discharge. Pharmacists are also actively involved in facility-wide programs and committees (especially those that deal with quality assurance and facility accreditation) and serve as preceptors of pharmacy residents and students.

In the future, IHS pharmacy practice will emphasize the expansion of patient-care activites and primary-care programs, effective use of prescribing authority, and the refinement of patient consultation services, services for the elderly, home health-care services, and inpatient clinical services.

Davidson, J.R.
"Training Amerindian Primary Health Care Workers: Evaluation of Government Training of Aguaruna (Jivaro) Traditional Birth Attendants", Medical Anthropology, (Winter, 1985), 9 (1), 65-83.

This paper addresses an urgent problem faced by Amerindians--How can Western techniques of primary health care (PHC) be taught in a way that will most effectively upgrade their standard of health without interfering with traditional concepts of medical care or disrupting community life? The results of a consumer-based evaluation of primary health care training of Jivaroan women suggest that techniques found to be effective in nonindigenous settings are not as successful when applied in some indigenous communities. The primary problem of training indigenous health workers, obtained during a study of the effectiveness of the national Peruvian traditional birth attendant (TBA) training program, lies in the conceptual differences between the interpretation of the economic system, organization of the health system, and perceived health needs of indigenous communities as viewed by national and regional health planners and administrators versus the views of members of indigenous communities.

Dietrich, A.J., and Olson, A.L.
"Model System of Ongoing Care for Native Americans---a 5-Year Followup", Public Health Reports, (March-April, 1986), 101 (2), 184-187.

In 1979, continuing care from a personal physician was identified as a priority at the Indian Health Sevice site in Zuni, NM, a rural hospital and ambulatory care center serving 7,000 Zuni people. To encourage such care, a system was established that assigned each patient to a regular physician and organized physicians into teams. Three teams, each consisting of three clinicians and other support personnel, served specific geographic regions of the village.

Five years later, the ongoing care provided for active randomly selected prenatal, diabetic, and general clinic patients was evaluated. The physician staff of the site had gone through a complete turnover during the previous five years. Based on a chart review for the year prior to patient identification, patients saw their regular physician from 48 to 61 percent of the time in all their visits, and their regular physician or his or her team colleague from 71 to 82 percent of the time in all their visits.

Ongoing care from a personal physician or close colleague can be achieved in the Indian Health Service. Organization of physicians into teams appeared to be the critical element in promoting ongoing care at this site where physician turnover is high. Team physicians seldom all leave at once, and ongoing care as a priority is passed on by the attitude of other team physicians, by transfer of specific patients, and patient expectation. Given the established benefits, ongoing care from a personal provider should be encouraged in the Indian Health Service as in other primary care settings.

Farkas, C.S., and Shah, C.
"Public Health Departments and Native Health Care in Urban Centres", Canadian Journal of Public Health, (July-August, 1986), 77 (4), 274-277.

The health issues of urban Native peoples in Canada are poorly documented. Although Natives make up only a small percentage of the total populations of Canadian cities, they are often a sizable group and they appear to have many unmet health needs. Since the mandate of public health departments includes health surveillance and promotion as well as health programs for high risk populations, we have surveyed the types of program developed for Native populations in urban centres. The implications of our findings are discussed and recommendations and challenges are offered to the public health departments in Canadian cities.

Farris, L.
"Challenges in Serving the Elderly American Indian", Florida Nurse, (June, 1986), 34 (6), 12.

Enormous changes have taken place in the field of aging during the past decade. Not only are people living longer but many are living better. This represents a success in serving the elderly; needless to say, however, there remain numerous and significant problems to be solved. The situation is very evident in South Florida, where the highest percent of elderly in the nation reside.

An examination of the attitude of direct care providers and nursing students reveals a basic lack of knowledge as well as attitudinal biases and stereotypes regarding the needs and capacities of South Florida's multicultural elderly population. In an effort to make providing care to the elderly a more positive experience, the researchers sought a way to provide information on four ethnic groups living in South Florida: American Blacks, American Indians, Hispanic Cubans, and Jewish Americans. This paper examines solely the American Indians of South Florida.

According to the 1980 Census, the Native American population in the United States was slightly over one million. Representing over 300 tribes, almost all speak their own tribal language. The vast majority of American Indians live in the western part of the United States. The two tribes living in South Florida are the Seminole and Miccosukee Indians.

Fischler, R.S. and Fleshman, C.
"Comprehensive Health Services for Developmentally Disabled Navajo Children", Developmental and Behavioral Pediatrics, (February, 1985), 6 (1), 9-14.

A retrospective study of 60 Navajo children with developmental disabilities was conducted to evaluate the quality and comprehensiveness of health services provided. Descriptive analysis by a multidisciplinary panel included medical record reviews, family interviews, and site visits to local health, educational, and family support services. Findings included timely and appropriate management of "medical" problems but a general neglect of "developmental" issues, such as hearing, speech/language, cognitive, and behavioral functioning, and attention to family understanding and adjustment toward caring for a handicapped child. Primary prevention and screening efforts were judged generally adequate, although not utilized by the majority of mothers of disabled children. Diagnostic assessments, family counseling, and referrals for treatment were incomplete, fragmented, and poorly coordinated. These problems resulted in potentially harmful delays in making referrals to available treatment programs. The majority of families interviewed tended to focus on the "medical" problems, had a poor understanding of the "developmental" components, and rarely participated actively in treatment.

Garro, L.C., Roulette, J., and Whitmore, R.G.
"Community Control of Health Care Delivery: The Sandy Bay Experience", The Canadian Journal of Public Health, (July-August, 1986), 77, 281-284.

In 1983, the Sandy Bay Band in Manitoba received a grant from Health and Welfare Canada through the Community Health Demonstration Program. The demonstration project has centered on setting up a structure for transferring control of health services to the Band and developing health education programs and projects sensitive to community needs. Although we focus on the local effect of the project, it is also evaluated in the context of the demonstration grant program and self-determination of Indian people.

Guidotti, T.L.
"The Impact of a California Indian Health Program as Reflected in Hospitalization Trends", Public Health Reports, (January, 1980), 94 (1), 3-15.

Medical services to Indian residents in California are funded through local communities through the Indian Health Service, as they are in other states. There is very little information, current or historical, on the health trends of Indians in California, where the total population of Indians is small and fragmented into numerous tribes and linguistic groups. The Modoc-Lassen Indian Development Committee is a community agency founded in 1967, initially under state sponsorship, to provide auxiliary health services to Indians in two remote rural counties. These services include the use of trained health aides who provide transportation, visitation, and advocacy. Ten years of hospital admissions were reviewed for Indian residents of Modoc County (estimated Indian population 300). Declining admissions for respiratory diseases, accidents, and all causes combined were apparent. Admissions for chronic diseases, such as diabetes, increased suggesting previous under-utilization of available services. Interruptions in the overall trends in diagnostic categories could be related to known historical events in most cases.

These included documented epidemics, initiation of a screening program, and the introduction of supporting services. The relative frequency of admissions for major diagnoses agreed with the scanty information available from other sources on the health problems of this population and California Indians in general. Admissions data are incomplete indices of health status but they may be profitably employed to assess local situations where other sources of information are not available.

Kunitz, S.J.
"Underdevelopment, Demographic Change, and Health Care on the Navajo Indian Reservation", Social Science and Medicine, (March, 1981), 15A (2), 175-192.

Employing a historical approach, the Navajo Indian Reservation is understood as an underdeveloped nation. The consequences are examined in terms of demographic response, organization and utilization of health services, and employment patterns within the service sector generally and in health care specifically. In some respects, the health and other services come to serve as a misplaced target for the Indians' anger and frustration which might be better directed toward more fundamental concerns such as control of natural resource extraction, control of local business and industry, etc. The focus on health may also teach people that their problems are personal, which they are not.

Kunitz, S.J., Temkin-Greener, H., Broudy, D., and Haffner, M.
"Determinants of Hospital Utilization and Surgery on the Navajo Indian Reservation: 1972-1978", Social Science and Medicine (Medical Anthropology), (January, 1981), 15B (1), 71-79.

Hospital data from the Navajo Reservation indicate that utilization has been responsive to changes in the health care system, Navajo social organization, and disease patterns. Distance of a community from the nearest hospital is the best predictor of hospitalization rates in the community but involvement in the wage economy and household size also enter significantly into the regression. Age of patients is also significantly related to distance as well as to age of the population and to dependence upon welfare. The rate of cholecystectomies in a community is best explained by distance from the nearest hospital offering surgery. This is in contrast to rates of appendectomies and hysterectomies, which appear to be most significantly related to measures of acculturation to the dominant society.

Morrow, R.C.
"Using Staff Input to Set Priorities in an Indian Service Clinic", Public Health Reports, (July-August, 1987), 102 (4), 369-371.

The McLauhglin Public Health Service clinic serves several thousand Lakota people (Sioux) on Standing Rock Indian Reservation, SD. In 1981, a priority-setting exercise established for the first time a grassroots expression of the concerns of the clinic's staff.

A three-step process was used in which each staff member first compiled an open-ended list of health needs, then ranked the relative contribution of five factors to making these problems important, and assessed each problem listed by those factors. The factors used were mortality, morbidity, vulnerability to intervention, facilities on

hand, and social implications. The resulting priority table represented each person's assessment of the health needs of the community. A composite table was created to represent the group's assessment. The staff concluded that among the many problems listed, alcoholism and diabetes were the most compelling health problems. The priority score was almost identical for each, but the reasons were different. Alcoholism was rated highly because it was felt to be widespread and had serious social implications. Diabetes was ranked highly because it was felt to be lethal and vulnerable to intervention. A significant long-term benefit to the clinic of the 3-month process was to stimulate consultation within the local clinic and to unify the health team, endowing the members with a common sense of purpose.

Nighswander, T.S.
"High Utilizers of Ambulatory Care Services: A 6-year Follow-up at Alaska Native Medical Center", Public Health Reports, (July-August, 1984), 99 (4), 400-404.

In a retrospective study, 100 randomly selected, high utilizers of ambulatory care services in 1972 were followed for a six-year period, 1973-78. The 22 men and 78 women had visited the Alaska Native Medical Center in Anchorage 15 or more times in 1972. Each patient was matched by age and sex with a control patient who had made three or fewer visits.

There were predominately more women than men in all age groups in the high-utilizer group and in all but one age group in the general clinic population. High-utilizer men as a group were older than high-utilizer women. In the follow-up period, the men in the high-utilizer group had three times the number of hospitalizations as the controls, and women had two times the number. At the end of the followup period, 1 of every 4 men in the high-utilizer group had died, and 1 of every 10 women had died. One-half of these deaths were associated with alcohol.

Several approaches to high-utilizer patients are useful. A well-organized medical record, with a complete problem list and index, is imperative. Just as helpful is only having one or several health care providers consistently see the patient at each encounter. Until there is more study of these complex issues, high utilizers must be recognized as a subgroup of patients at high risk for hospitalization and early death.

Rhoades, E.R., D'Angelo, A.J., and Hurlburt, W.B.
"The Indian Health Service Record of Achievement", Public Health Reports, (July-August, 1987), 102(4), 356-360.

The Indian Health Service (IHS) was transferred from the Department of Interior to the Public Health Service in the Department of Health, Education, and Welfare in 1955. At that time, the general health of

Indian people substantially lagged behind the rest of the U.S. population. This gap was reflected in mortality rates which were several-fold higher for Indians, or reflected in time; there were decades between the dates when the U.S. population achieved certain lower death rates compared with the dates when similar reductions were achieved by Indians. As a result of preventive health programs, improvements in sanitation, and the development of a number of medical advances, substantial progress has been achieved in improving the health of American Indians and Alaska Natives. Life expectancy of Indians has increased 20 years between 1940 and 1980. From 1955 through 1982, the death rate for Indian infants dropped by 82 percent. Also, the age-adjusted death rate for tuberculosis decreased from 57.9 per 100,000 population in 1955 to 3.3 in 1983. These and other improvements are summarized in this paper.

Rhoades, E.R., Reyes, L.L., and Buzzard, G.D.
"The Organization of Health Services for Indian People", Public Health Reports, (July-August, 1987), 102 (4), 352-356.

The Indian Health Service (IHS) is a bureau of the Health Resources and Services Administration, an agency of the Public Health Service. It was formed in 1955 by a transfer of health services from the Bureau of Indian Affairs, Department of the Interior. Since that time, IHS has grown larger and more complicated and has become a truly complex national organization that is responsible for direct and contract health care services to approximately 1 million Indian people. The historical background of the Service, its present organization, and the services that it provides through a variety of organizational structures are outlined in this report.

Robertson, L.S.
"Community Injury Control Programs of the Indian Health Service, an Early Assessment", Public Health Reports, (1986), 101 (6), 632-637.

In response to the high rates of injury morbidity and mortality among Native Americans, the Indian Health Service initiated community injury control programs in 1982 mainly aimed at educating the populations served. Substantial declines in hospitalization rates per population for falls, motor vehicle injuries, and assaults were observed through 1984. Regression analyses of changes in hospitalization rates for particular types of injury in relation to rates of persons served in 54 service units suggests some favorable effect of certain activities and possible adverse effect of a few. Increased targeting of effort based on detailed surveillance of serious injuries is planned.

Rudolph, R.
"The Indian Health Service: Is There a Better Way?", South Dakota Journal of Medicine, (February, 1986), 39 (2), 17-19.

The history and evolution of the provision of health care for American Indians is briefly traced. Problems in the delivery of care, particularly on South Dakota reservations are outlined. How these will be addressed in an era of rapid change in delivery of care systems, and federal budget limitations is problematic. The author concedes the weaknesses of the present Indian Health Service; but feels many of these are results of culture, isolation, poverty, and tradition. Input, consent, and support of the Native American is necessary for any new or different approach.

Shah, C.P. and Farkas, C.S.
"The Health of Indians in Canadian Cities: A Challenge to the Health Care System", Canadian Medical Association Journal, (November, 1985), 133 (9), 859-863.

It is well known that Canadian native people living on reserves have high morbidity and mortality rates, but less is known about the health of those who migrated to urban centres. Several studies have shown that these people have high rates of mental health problems, specific diseases, injuries, infant death and hospital admission. In addition, there is evidence that cultural differences create barriers to their use of health care facilities. The low socioeconomic status, cultural differences and discrimination that they find in cities are identified as the primary blocks to good health and adequate health care. More epidemiologic studies need to be done to identify health problems, needs and barriers to health care. Federal, provincial and civic governments along with the appropriate departments of faculties of medicine should begin working with native organizations to improve the health of native people living in Canada's cities.

Shannon, G.W. and Bashshur, R.L.
"Accessibility to Medical Care Among Urban American Indians in a Large Metropolitan Area", Social Science and Medicine, (1982), 16 (5), 571-575.

Federal health and medical care programs recently mandated for American Indians living in cities are predicated upon information pertaining to their unmet health needs and assessments of their accessibility to medical care. Based upon a household survey conducted among a representative Indian population living in a large metropolitan area, an evaluation is made of the accessibility experience of this population as it pertains to primary medical care. Using measures of accessiblility including travel time, appointment delay time, and waiting room time, the experiences of Indian residents of major residential sections of the area are illustrated. Comparative

assessments are made on the basis of the individual convenience factors as well as on the basis of an aggregate index of accessibility that has been proposed for health planning and evaluation. Significant differences in accessibility to primary care between residents in certain residential areas are demonstrated and suggestions for revision of the accessibility standards are offered.

Titley, K.C. and Bedard, D.H.
"An Evaluation of a Dental Care Program for Indian Children in the Community of Sandy Lake Sioux Lookout Zone, 1973-1983", Canadian Dental Association Journal, (November, 1986), 52 (11), 923-928.

This study reports on the level of caries over a 10-year period in the Indian community of Sandy Lake in the Sioux Lookout Zone. Aspects of the present dental service are examined and suggestions are made for the implementation of improved preventive services.

Young, T.K.
"Indian Health Services in Canada: A Socio-historical Perspective", Social Science and Medicine, (1984), 18 (3), 257-264.

The major trends and issues in the historical development of Indian health services in Canada since Confederation are discussed according to: (1) the legislative bases, including the BNA Act, the Indian Act, Indian Treaties, landmark court decisions and post-War national health legislations; (2) the policy statements of the federal government regarding services to Indians, culminating in the Indian Health Policy of 1979; (3) the changes in the organization and delivery of health services from the appointment of the first chief medical officer in 1904 to the multi-million operations of the Medical Services Branch in the 1980s; and (4) the reaction of Indian communities and political organizations to government-sponsored health care and the recent trend towards their increasing participation.

Young, T.K.
"The Canadian North and the Third World: Is the Analogy Appropriate?", Canadian Journal of Public Health, 74, (July-August, 1983), 239-241.

It is often suggested that the health problems of the Canadian North, like the social and economic conditions, resemble those of most Third World countries. However, the principle causes of death and disability are actually very different, as also is the nutritional status and the supply of health services. "Health for all by the year 2000" is an achievable goal in the Canadian North, but may not be in many Third World countries.

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ABSTRACTED CITATIONS

Bushnell, J.M.
"Northwest Coast American Indians' Beliefs About Childbirth", Issues in Health Care of Women, (1981), 3 (4), 249-261.

Knowledge about beliefs and behaviors surrounding pregnancy and childbirth could aid the current health system to develop an approach toward pregnancy and childbirth care that allows for adaptation according to individual women's cultural perspective. A descriptive study was done to obtain current information on beliefs about pregnancy and childbirth of Northwest Coast Indian women. General ethnographic data were collected by means of participant-observation and were compiled into field notes. Informally structured interviews were used to elicit data concerning current beliefs about pregnancy and childbirth.

Ethnographic information obtained was mostly on an empirical level since many tribal actions were not readily discussed with outsiders to the community, including fellow Native Americans. Twenty-five expressed beliefs about pregnancy and childbirth were identified and categorized into two sets. The first set included the beliefs expressed by all respondents and indicated their relationship to traditional beliefs identified from the literature. The second set contained only those beliefs expressed by respondents of childbearing age.

Based on these beliefs and integrating transcultural nursing theory, implications for nursing actions are delineated. The nursing actions outlined include specific techniques, evolved from transcultural nursing concepts, that would be useful when caring for individual Native American women in community, outpatient, and inpatient settings. The implications also offer broad guidelines for developing effective care modalities when working with Native American women.

Camazine, S.M.
"Traditional and Western Health Care Among Zuni Indians of New Mexico", Social Science and Medicine (Medical Anthropology), (February, 1980), 14B (1), 73-80.

This study examines the role of traditional and Western health care among the Zuni Indians of New Mexico. Over the past 100 years, changes in the practice of traditional medicine have resulted from alterations in the Zuni life style and the introduction of health care provided by the Public Health Service. These alternative systems of health care

are both utilized to a varying extent, determined by many factors. The present-day beliefs and expectations of the Zuni concerning disease, its etiology and its treatment are described in an analysis of the interaction between the traditional and Western health care systems. The value of traditional medical practices is examined and the importance of understanding them is stressed with the goal of increasing awareness of the health care providers of conflicts that may arise with the introduction of Western medicine. Suggestions are made that may facilitate the acceptance of modern health care in communities where traditional medicine plays an important role.

Coulehen, J.
"Navajo Indian Medicine: Implications for Healing", Journal of Family Practice, (1980), 10, 55-61.

Traditional medicine men coexist with physicians and hospitals on the 25,000 square mile Navajo Indian Reservation. Most seriously ill Navajos utilize both systems of health care. This natural experiment of coexistence emphasizes several general characteristics of all healing. Traditional ceremonies are successful because they are integrated into Navajo belief systems and meet needs of sick people not dealt with by the available Western medicine. Physicians and other healers simply remove obstacles to the body's restoration of homeostasis or, as the Navajo say, to harmony. Reductionism limits the spectrum of obstacles considered relevant (eg, causes of illness), but an alternate model might include emotional, social, or spiritual phenomena equally as significant to healing as are biochemical phenomena. In that context, nonmedical healers, as well as physicians, can potentially influence factors relevant to getting well.

Mason, J.C.
"Ethnicity and Clinical Care: Indians", Hospital Physician, (1981), 17 (10), 122-125.

Language can be the greatest barrier to health care delivery. Indian patients may have difficulty with conversational English to say nothing of medical or anatomical professional jargon. Anglo physicians should gain some knowledge of Indian terms related to illness and disease.

Oetinger, G., III
"Running Against the Wind: The Human Factor. Patients' Perspectives of Traditional Navajo Healing Practices Presently Used on the Reservation", Mid-South Sociological Association Paper, (1980).

Explored is the relationship between the use of traditional healing practices and the sociocultural and economic changes taking place on the Navajo Reservation. The ongoing process of "getting well" has been

analyzed through the eyes of the patient, in addition to utilizing more normative historical and sociocultural variables. Data were collected over a period of two years using informal conversations, structured interviews, review of anthropological literature, and participant observation. Two major criteria were used in the selection of patients: the nature of the ceremony performed on the individual, and an attempt to achieve a diversity of patient profiles. Six transitional stages in the process of "getting well" were identified: (1) a felt need, (2) seeking validation, (3) discerning what preparations must be made, (4) making a commitment and (5) percieved results.

NON-ABSTRACTED CITATIONS

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"A Traditional Navajo Medicine Woman ... a Modern Nurse-Midwife..... Healing in Harmony", Front Nursing Service Quarterly Bulletin, (Winter, 1987), 62 (3), 6-13.

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"Nurses and Traditional Healers", The Canadian Nurse, (September, 1987), 25-27.

Harvey, H.R.
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"Indian Healing Practices and the Indian Health Service: What do we Know? Why don't we Know More?", Listening Post, (1982), 4 (2), 42-44.

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Smith, J.E.
"American Indian Medicine: Paternalism and Plurism", letter to the editor, Journal of the American Medical Association, (April 18, 1986), 255 (15), 2027-2028.

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Bashshur, R., Steeler, W., and Murphy, T.
"On Changing Indian Eligibility for Health Care", American Journal of Public Health, (June, 1987), 77 (6), 690-693.

We analyzed the ramifications and potential effects of a pending regulation that restricts Indian eligibility for health care. The most serious implication is a dwindling of support for Indian health care while the health of Indians continues to lag behind that of all other groups in the United States. Empirical analysis in one service area of the Indian Health Service (IHS) in Oklahoma reveals Indians of lower blood quantum to be younger, lower utilizers of expensive medical services, especially hospitals. The sudden loss of health care benefits from IHS will be detrimental not only to this population and to an ever increasing number of Indians in the future but also to the local service units in the Indian Health Service.

Bell, C.
"The Navajo Patient: Illumination of Cultural Differences", Colorado Medicine, (April, 1980), 77 (4), 127-130.

A variety of cultural backgrounds exists in every patient population, some vastly different from our own personal experience. The Navajo nation, approximately 148,000 people, offers a dramatic display of how customs and folkways can alter the individual's view of medicine. The traditional religion/medicine of the Navajos, with its concepts of environmental disharmony, witch-craft, and ceremonials is discussed in hopes of providing a better understanding of the cultural differences we must deal with as health care professionals.

Churchill, W. and LaDuke, W.
"The Political Economy of Radioactive Colonialism", The Insurgent Sociologist, (1986), 13 (3), 51-78.

It is argued that American Indians are being exposed to deadly gases by the US government in a wholesome and irresponsible manner. Carcinogenic radon gas vented from underground uranium mines contaminates native communities; groundwater is being contaminated by radioactive waste in several reservation areas. Is it carelessness and callousness or a deliberate genocidal policy? In Resistance to Radioactive Colonialism: A Reply to the Churchill/LaDuke Indictment,

Glen T. Morris comments that Churchill and LaDuke have provided us with an immediate challenge; we must defeat radioactive colonialism. The outcome of the next few years will spell the difference between a just and humane society or one that is barbaric.

Connop, P.J.
"A Canadian Indian Health Status Index", Medical Care, (January, 1983), 21 (1), 67-81.

Health care services for registered "band" Indians in Ontario are provided primarily by the Canadian Federal Government. Complex management methods preclude the direct involvement of Indian people in the decisions for their health resource allocation. Health indicators, need, and health status indexes are reviewed. The biostatistics of mortality and demography of the Indian and reference populations are aggregated with hospitalization/morbidity experience as the Chen G' Index, as an indicator of normative and comparative need. This is weighted by linest measurements of perceived need for preventive medicine programs, as ranked and scaled values of priorities, Z. These were determined by community survey on 11 Indian reserves using a non-probabilistic psychometric method of "pair comparisons," based upon "Thurstone's Law of Comparative Judgement." The calculation of the aggregate single unit Indian Health Status Index [Log.G'].Z and its potential application in a "zero-base" budget is described.

Coulehan, J.L., Baacke, G., Welty, T.K., and Goldtooth, N.L.
"Cost-Benefit of a Streptococcal Surveillance Program Among Navajo Indians", Public Health Reports, (1982), 97 (1), 73-77.

The frequency, demography, and clinical characteristics of acute rheumatic fever (ARF) and rheumatic heart disease (RHD) among the Navajo Indians over a 16-year period were reported recently. A school-based rheumatic fever prevention program had been instituted in many parts of the Navajo Reservation during the last 2 years (1975-1977) of that period. This program, based on experience with streptococcal disease control in Wyoming and Colorado, involved periodic culturing of throat specimens from both symptomatic and asymptomatic school children and the treatment of those whose cultures were positive for group A beta-hemolytic streptococci. There was some indication that ARF occurred less frequently among children in geographic units covered by the program than in uncovered areas, but the number of reported cases was small in the 2-year period, and the variation may have been caused by chance alone.

During the subsequent 2 years, the rheumatic fever control program continued to reach a large number of Navajo elementary school children, but because of personal and transportation constraints, it did not reach all schools. Consequently, it was possible to review all cases of ARF diagnosed in school children for a period of more than 4 years

and to ascertain whether each affected child attended a school that was active in the program or for whom a throat culture was performed immediately before the development of ARF. Two hypotheses were tested. First, the risk of ARF in children ages 5 to 16 was higher among those who did not attend schools active in the program or for whom a throat culture was not done during the 2 months before their ARF was diagnosed. Second, the benefits of the program, expressed in monetary terms, outweighed its costs.

Coulehan, J.L., Hirsch, W., Brillman, J., Sanandria, J., Welty, T.K., Colaiaco, P., Koros, A., and Lober, A.
"Gasoline Sniffing and Lead Toxicity in Navajo Adolescents", Pediatrics, (January, 1983), 71 (1), 113-117.

During a 6-year period, 23 Navajo adolescents were hospitalized 47 times for presumed lead intoxication secondary to gasoline sniffing. Most patients were male (87%) and sniffed gasoline as a social activity, more frequently in spring and summer. Sixty-five percent of the patients first presented with toxic encephalopathy. Of total episodes, 31% involved asymptomatic lead overload; 31% involved tremor, ataxia, and other neurologic signs; and 38% involved encephalopathy with disorientation and hallucinations. Free erythrocyte protoporphyrin levels were not consistently high, although blood lead levels were all elevated. One death occurred. Approximately 11% of 537 Navajo adolescents said they inhaled gasoline for enjoyment at least occasionally.

Among 147 junior high school students, blood lead levels averaged 18+or-6 ug/dL with no values >40 ug/dL. Three of these students had elevated zinc protoporphyrin levels and all three where anemic. No correlation was found between levels of blood lead or zinc protoporphyrin and whether or not the youth reported sniffing gasoline. However, sniffing gasoline was associated with poor school performance and delinquent behavior. Although apparently many Navajo adolescents experiment with gasoline inhalation, only a few engage in this activity frequently enough to develop either asymptomatic or symptomatic lead overload.

Daniels, T.J.
"A Study of Dog Bites on the Navajo Reservation", Public Health Reports, (1986), 101 (1), 50-59.

Reservation-wide dog-bite statistics indicate a bite rate on the Navajo Reservation that is comparable to that of a large city. Detailed analysis of 772 bite reports was made to determine the characteristics of biters and their victims. This included an assessment of the behavioral antecedents leading up to the bite incident; 98.4 percent of all cases for which a possible cause could be ascertained were provoked in some way. Both dog control and public education measures need to be taken to reduce the frequency of dog bites.

Fischler, R.S.
"Child Abuse and Neglect in American Indian Communities", Child Abuse and Neglect, (October, 1983), 9 (1), 95-106.

Child abuse and neglect have recently been found to occur among American Indians at rates comparable to other American population groups. Little is known about the clinical spectrum of Indian maltreatment, the psychodynamics and effective treatment modalities. Cultural misunderstanding, modernization, poverty, situational stress, poor parenting skills because of early break-up of Indian families, alcoholism, unusual perceptions of children, handicapped children, and divorce constitute factors associated with maltreatment in cases cited.

Old solutions of removing children from families were largely inappropriate and ineffective and are being replaced by local efforts to develop foster homes, supportive family services, and legal procedures to protect children. Communication between agencies involved and mistrust of outsiders plus a lack of trained personnel and available community resources continue to pose major barriers to effective treatment and prevention efforts. Recent federal policies and laws clearly place the responsibility for child welfare in the hands of Indian tribes and tribal courts. The non-Indian health professional has an important but limited role in providing technical expertise and in aiding development of community resources, taking care to support but not usurp the emerging leadership of Indian people.

Fox, J., Manitowabi, D., and Ward, J.A.
"An Indian Community with a High Suicide Rate--5 Years After", Canadian Journal of Psychiatry, (August, 1984), 29 (5), 425-427.

This report deals with the five year follow-up after a suicide epidemic on a Manitoulin Island Indian Reserve in 1974 and 1975. In the succeeding years, the suicide rate has dropped to a tenth of the level of the epidemic and has reached the levels for the rest of Manitoulin Island including the White and Native population. There has been a corresponding drop in the rate of violent death and of the number of suicide attempts. It is suggested that the multi-dimensional prevention and intervention measures reported here have contributed to a significant improvement in present conditions.

Hodgson, C.
"The Social and Political Implications of Tuberculosis Among Native Canadians", The Canadian Review of Sociology and Anthropology, (1982), 19 (4), 502-512.

Concepts of disease and the organization of health care are influenced by cultural and social theories. An example of this process is the treatment of tuberculosis (a disease believed to have been introduced to North American by European settlers) among Indian and Inuit groups

in Canada. The quantity and quality of health care extended by the federal government to tubercular native Canadians has varied over time. The explanations for this phenomenon can differ according to the observer's perspective. More research is needed if we are to understand the overall effect of tuberculosis treatment on native society and on native/non-native relations in Canada.

Holm, T.
"Culture, Ceremonialism, and Stress: American Indian Veterans and the Vietnam War", Armed Forces and Society, (1986), 12 (2), 237-251.

An examination of post-traumatic stress disorder (PTSD) in American Indian veterans of the Vietnam War, based on extensive interviews with 35 veterans from various tribes and direct observations of Indian communities. Many Rs reported discriminition and stressful combat experiences, readjustment problems because of society's attitudes toward the war, and dissatisfaction with American Indian policy, although some had a positive outlook about their experience in Vietnam.

It is found that participation in purifying ceremonies, family support network, enhanced SS in their communities, and a "social absorption of combat-related trauma" on the group level helped a number of veterans deal with problems related to PTSD.

Humphrey, G.W.
"Civil Commitment of Indian Persons: A Dilemma in Mental Health and Law", White Cloud Journal of American Indian Mental Health, (1985), 3 (4), 27-30.

The dilemma facing mental health and judicial systems confronted with dangerous and mentally ill Indian persons residing on Indian land is discussed. Federal legislation does not provide for involuntary civil commitment of such individuals. States in most instances do not have jurisdiction on Indian lands. Legal lacunae hinders the protection of Indian communities. Delivery of appropriate mental health services to offenders is precluded. The extralegal solution of one Ariz tribe is discussed. It is suggested that Congress follow the precedent set in the Indian Child Welfare Act in providing for tribes to commit their mentally ill, dangerous members to state institutions.

Jarvis, G.K. and Boldt, M.
"Death Styles Among Canada's Indians", Social Science And Medicine, (1982), 16 (4), 1345-1352.

Data are examined from a prospective study of Native mortality on 35 reserves and colonies in the province of Alberta, Canada. Native Indian deaths tend to occur at a younger age than others, to be

multiple events and to occur in non-hospital settings with others present. In almost half the cases death resulted from accident, suicide or homicide. Though circumstances of weather and physical isolation, as well as human negligence and carelessness resulted in some deaths, the majority of violent deaths were associated with the heavy use of alcohol.

Johnson, F.L., Cook, E., Foxall, M.J., Kelleher, E., Kentopp, E., and Mannlein, E.A.
"Life Satisfaction of the Elderly American Indian", International Journal of Nursing Studies, (1986), 23 (3), 265-273.

This study examined the life satisfaction of 58 elderly American Indians and its relationship to selected external and internal environmental factors. Elderly Indians were 51-85 years of age and resided on two midwestern reservations. Data were collected through use of the Life Satisfaction Index Z-scale (LSI-Z), the Oars Multi-dimensional Functional Assessment Questionnaire (OARS) and a semi-structured interview schedule. Findings indicated that life satisfaction tended to be high. Six internal environmental variables explained 40% of the variance in life satisfaction scores. A higher correlation was found between self-perception of life satisfaction and mental health than objective ratings on these two variables. This study suggests that variables associated with the internal environment may be useful as indicators of life satisfaction in elderly reservation American Indians and that subjective measures of life satisfaction may be more predictive of mental health than objective measures.

Kaufert, J.M. and Koolage, W.W.
"Role Conflict Among 'Cultural Brokers': The Experience of Native Canadian Medical Interpreters", Social Science and Medicine, (1984), 18 (3), 283-286.

This paper examines the role conflicts among Cree and Saulteau language-speaking interpreters working in two urban hospitals providing tertiary medical care services to Native Canadians from remote northern communities. Over an 18 month period, participant-observation and analysis of videotaped clinical consultations were utilized to develop an inventory of roles and situational contexts characterizing the work of Native interpreters in urban hospitals. Sources of role conflict were found to be associated with cross-pressures in their roles as language interpreters, culture-brokers and patient advocates.

Kessel, J.A. and Robbins, S.P.
"The Indian Child Welfare Act: Dilemmas and Needs", Child Welfare, (May-June, 1984), 63 (3), 225-232.

Since its passage in 1978, P.L. 95-608 has been a source of controversy, poorly understood and, hence, poorly practiced. Writing in the interests of all parties, judicial, child welfare, and Indian, the authors give an overview of the significance of P.L. 95-608 and the obstacles that beset its implementation and suggest avenues of training to overcome the obstacles.

Kost-Grant, B.L.
"Self-Inflicted Gunshot Wounds Among Alaska Natives", Public Health Reports, (1983), 98 (1), 72-78.

Deaths by violence (accidents, homicide, suicide) have increased significantly among Alaska Natives who have a suicide rate three times that of the general U.S. population. Self-inflicted gunshot wounds comprised 75 percent of the suicides among Alaska Natives from 1976 through 1980. A review of psychiatric consultations concerning 34 Alaska Natives who had survived a self-inflicted gunshot wound indicated some common characteristics. Of the group, 28 were male, and 20 had been using alcohol at the time of the shooting. Inter-personal conflicts were cited by most persons as partial motivation for the shooting, and most shootings were impulsive rather than premeditated. Few patients had a psychiatric history or appeared impaired at the time of the consultation.

Cultural and intrapsychic factors that might contribute to this high rate of self-destructive behavior were examined. These include a proscription against verbal expression of negative affect and an increase of non-Native influences with subsequent social disorganization and cultural conflict.

Lewis, T.H.
"A Sioux Medicine Man Describes His Own Illness and Approaching Death", Annals of Internal Medicine, (March, 1980), 92 (3), 417-418.

A Sioux medicine man spent a long professional life as a "primary care" rural indigenous practitioner. He was treated, against his wishes, in a modern hospital for his own last illness. His description of that experience and of his non-Western medical practice emphasizes persisting problems in the humanistic aspects of our science.

Mahmoudi, H.
"Cross-Cultural Survey of Health Care: American Indian and United States Populations", Western Social Science Association, (1984).

A cross-cultural comparison of major health care characteristics among the American Indian and White American populations, based on vital health statistics from various government agencies and research papers. The relationship between culture (or subculture) and health care systems, as related to these two populations, is discussed. Although American Indians reside in a highly modern, industrialized, and economically wealthy nation, their health profile is atypical of the general US population, and more exemplary of poor, less-developed populations found among Third World nations. Major hindrances within the present US health care delivery system are discussed, and possible solutions to the dilemma at hand are offered.

Manson, S.M., (Ed.)
New Directions in Prevention Among American Indian and Alaska Native Communities. (1982, Portland: Oregon Health Sciences University.)

Proceedings of a workshop organized by the National Institute of Mental Health to focus on prevention concerns of American Indians and Alaska natives. Each chapter is followed by a discussion by the participants. Key chapters relating to Indian health care are "Prevention Research Among American Indian and Alaska Native Communities: Charting Future Courses for Theory and Practice in Mental Health"; "Mental Health Promotion with Navajo Families"; "American Indian Mental Health and the Role of Training for Prevention"; "American Indian Community Mental Health: A Primary Prevention Strategy"; and "Otits Media and American Indians: Prevalence, Etiology, Psychoeducational Consequences, Prevention and Intervention."

Mao, Y., Morrison, H., Semenciw, R., and Wigle, D.
"Mortality on Canadian Indian Reserves 1977-1982", Canadian Journal of Public Health, (July-August, 1986), 77 (4), 263-268.

We computed age specific and adjusted mortality rates for Canadian Indian reserves for available provinces for 1977-1982 and compared to rates for Canada as a whole. Age-specific all-cause mortality rates were two to three times higher up to age 50. Standardized mortality ratios (SMRs) for ages 1-69 indicated elevated risks among both sexes for all major forms of accidents and violence (combined SMR male=3.2, female=3.7). The SMR was also greater than 3.0 among women for cirrhosis/alcoholism (4.4), diabetes (4.1) and pneumonia (3.5). Mortality rates for all cancer sites combined were lower than Canadian rates among both sexes (males SMR=0.53, females SMR=0.82). Only cervical cancer (SMR=3.9) was significantly elevated.

Markides, K.
"Minority Status, Aging, and Mental Health", Journal of Aging and Human Development, (1986), 23 (4), 285-300.

Research findings on mental health and life satisfaction among aged blacks, Mexican-Americans and Native Americans are reviewed. Although the literature has generally followed a social stress perspective that predicts greater mental health problems among minority group aged, the evidence shows that mental health and life satisfaction of these groups is not any lower than might be anticipated based on their relative socioeconomic standing. It is concluded that, despite increased research, little is known about how enthnicity and minority group status influence psychopathology and life satisfaction in late life.

Moffatt, M.E.
"Land Settlements and Health Care: The Case of the James Bay Cree", Canadian Journal of Public Health, (July-August, 1987), 78 (4), 223-227.

The James Bay Agreement (1975) gave the Cree Indians of northern Quebec control of their health care system with provincial rather than federal fiscal responsibility. Transfer was complete in 1981. Early administrative problems included financial crises, retention of professional staff and appropriate professional advice. An epidemic of gastroenteritis and an outbreak of tuberculosis in 1980 served to focus attention on important issues. These crisis were used by the Cree to consolidate their relationship with McGill University and to lobby successfully for water and sewage infrastructures. The system is working but is vulnerable to outside influence due to insufficient numbers of highly trained Cree personnel at all levels.

Murdock, S.H. and Schwartz, D.F.
"Family Structure and the Use of Agency Services: An Examination of Patterns Among Elderly Native Americans," The Gerontologist, (1978), 18(5), 475-481.

The social service needs and use rates of elderly Native Americans and their relationships to family structure are examined. Data from interviews with 160 elderly Native Americans living in a reservation setting indicate that levels of objective need are uniformly high, but especially so for elderly persons living alone. Levels of perceived service needs, awareness of service agencies, and use of agency serivces, however, are higher for those living in extended family settings. Family structure thus appears to be an important factor in the provision of services to elderly Native Americans.

Nuttall, R.N.
"The Development of Indian Boards of Health in Alberta", Canadian Journal of Public Health, (September-October, 1982), 73 (5), 300-303.

Health of Indian people in Alberta, and in Canada as a whole, is substantially poorer than the health of the general Canadian population. Gains made from 1945 until the 1960's have in general not been sustained in the 1970's, leaving most measurements of Indian health below Canadian standards. Recent data suggest a deterioration in the morbidity and mortality statistics among Alberta Indians in the late 1970's. As one strategy to improve Indian health, increased community involvement in community health services, and a degree of control of health services at the community level, has started in Alberta. The Alberta Indian Health Care Commission was established in 1980 to act as a province-wide Board of Health for the Indians of Alberta. In addtition, a local community-based Board of Health was established at the Blood Indian Reserve in 1980. In the summer of 1982 several other reserves in Alberta were developing community-based Boards of Health. This paper examines the rationale behind the formation of these new Boards of Health, their objectives, some problems encountered in their formation, and some prospects for the future.

Nutting, P.A., Burkhalter, B.R., Dietrick, D.L., and Helmick, E.F.
"Relationship of Size and Payment Mechanism to System Performance in 11 Medical Care Systems", Medical Care, (July, 1982), 20 (7), 676-690.

The performance of 11 medical care systems of varying size and payment mechanisms (consisting of six government owned and operated Indian Health Service units, three fee-for-service private practices and two HMOs) was studied. Performance was defined as the percentage of consumers in need of care who received adequate care according to predetermined standards for the process of care for various functions (i.e., prevention, screening, treatment, follow-up) and various health conditions (i.e., prenatal and infant care, hypertension, anemia, UTI). Size was found to have a strong negative relationship to the quality of treatment and follow-up care, but payment mechanism was significantly related to prevention performance. In screening, the results depended on the health condition: size was inversely related to performance of screening for hypertension; HMOs performed significantly better in screening for prenatal anemia; and neither size nor payment mechanism was related to performance of screening for infant anemia.

Owens, M.V., Cameron, C.M., Jr., and Hickman, P.
"Job Achievement of Indian and Non-Indian Graduates in Public Health: How do They Compare?", Public Health Reports, (July-August, 1987), 102 (4), 372-376.

A graduate education program in public health for American Indians was introduced in the fall of 1971 at the College of Public Health, University of Oklahoma Health Sciences Center. The program was initiated with support form the Office of Economic Opportunity.

Between August 1, 1971, and December 31, 1983, 52 American Indians received public health degrees from the University of Oklahoma's College of Public Health. Of that number, 50 received masters degrees in public health; 1 a PhD; and 1 a DrPH degree. Degrees were granted in these disciplines: biostatistics, epidemiology, environmental health, health administration, health education, and human ecology.

This study assesses the job achievements of 51 of those American Indian graduates. Each Indian was paired with a non-Indian graduate randomly selected from a cluster sample compiled from the school's files of non-Indian graduates. The results of this study showed that Indian graduates had the kinds and amounts of responsibilities, with the exception of budget approval responsibility, that one would acquire or expect to acquire in a key administrative or staff position. The study further indicated that Indian graduates were generally achieving as much success and satisfaction in their jobs as the non-Indian graduates.

Peck, R.E., Marks, J.S., Dibley, M.J., Lee, S., and Trowbridge, F.L. "Birth Weight and Subsequent Growth Among Navajo Children", Public Health Reports, (1987), 102 (5), 500-507.

An examination of length, weight, and birth weight data routinely collected from the clinics supported by the Navajo Nation Special Supplement Program for Women, Infants, and Children (WIC) showed an association between birth weight and subsequent growth status. Navajo children less than 2 years of age entering the WIC Program were divided into low, normal, and high birth weight groups, and their growth patterns were plotted when they returned periodically for reassessment.

Overall, the children tended to have low length-for-age and high weight-for-length measures, relative to the reference population, that suggest suboptimal nutritional status. Children with birth weights less than 2,500 grams (g) were consistently shorter, lighter, and thinner than children with birth weights greater than 2,500 g. Although the overall growth status of the children improved between 1975 and 1980, the growth among the children with low birth weights never fully caught up with that of the other Navajo children. Moreover, during that period, the normal birth weight group had a modest improvement in length-for-age relative to the reference population, but the low birth weight group did not. These findings suggest that prenatal interventions to improve the birth weight status of Navajo infants may result in improving the growth status of Navajo children.

Rhoades, E.R., Hammond, J., Welty, T.K., Handler, A.O., and Amler, R.W. "The Indian Burden of Illness and Future Health Interventions", Public Health Reports, (July-August, 1987), 102 (4), 361-368.

This article describes the burden of illness of Indians eligible for services from the Indian Health Service (IHS) and discusses strategies for reducing morbidity and mortality related to those conditions. To improve health to an extent that parallels the IHS's past achievements, the illnesses that now are prevelant among Indians require changes in personal and community behavior rather than intensified medical services. Analysis of these conditions leads to the conclusion that much of the existing burden of illness can be reduced or eliminated.

IHS is responding to this challenge by continuing to ensure Indians' access to comprehensive health care services, by increasing educational efforts aimed at prevention, and by enlisting the support of other government and private organizations in activities that have as their purpose (a) treating diseases if intervention will lessen morbidity and mortality (such as diabetes and hypertension) and (b) encouraging of dietary changes, cessation of smoking, exercise, reduction in alcohol consumption, and other healthy behavior.

Rhoades, E.R., Marshall, M., Attneave, C., Echohawk, M., Bjork, J., and Beiser, M.
"The Impact of Mental Disorders Upon Elderly American Indians as Reflected in Visits to Ambulatory Care Facilities", Journal of the American Geriatric Society, (1980), 28 (1), 33-39.

In order to assess the impact of mental health problems among elderly American Indians, a study was conducted on the utilization patterns of ambulatory care facilities by various age groups of Indians. Since most health care of Indians is rendered by the Indian Health Service (IHS), data obtained from IHS computer centers provided a reasonable index of disease patterns. Because the elderly have constituted such a snall fraction of the Indian population, they have not heretofore received significant attention. However, their problems are rapidly increasing. By adjusting the frequency of visits according to populations, an estimate of visit "rates" was made. These rates showed one visit for every 10 persons in the 0-44 age group, one for every 5 persons in the 45-54 age group, but only one visit for every 25 persons in the 65+ age group. Most of the visits by older Indians concerned "social" problems rather than "mental" disorders as such. These data provide information that should prove especially helpful in the design of social and health programs for elderly Indians.

Ross, C. and Davis, B.
"Suicide and Parasuicide in a Northern Canadian Native Community", Canadian Journal of Psychiatry, (May, 1986), 31, 331-333.

This report describes suicide and parasuicide in a small, remote Northern Canadian native community for a three-year period from 1981 to 1984. The overall rate for suicide was 77 per 100,000, with a rate of 241 for male treaty Indians age 20-24. Parasuicide in the form of overdose was epidemic, with a rate of 7,722 per 100,000 in treaty Indians females age 15-19. None of the completed decades had previous contact with the mental health system of previous parasuicides. The public health implications of these figures are discussed.

Shebala, B.A. and Reach, R.M.
"The Navajo Way", New Mexico Nurse, (December, 1983), 28 (4), 4-5.

Because the ways of the Navajo culture are unfamiliar to most non-Navajo nurses, a variety of problems are encountered in caring for Navajo patients. The purpose of this article is to briefly explain some general information that may increase the nurse's knowledge and understanding of the Navajo culture and convey specific advice in dealing with Navajo patients and their families.

Stewart, T., May, P., and Perez, P., Jr.
"A Navajo Health Consumer Survey", Medical Care, (December, 1980), 18 (12), 1183-1195.

The findings of a health consumer survey of 309 Navajo families in three areas of the Navajo Reservation are reported. The survey shows that access to facilities and lack of safe water and sanitary supplies are continuing problems for these families. The families show consistent use of Indian Health Service providers, particularly nurses, pharmacists and physicians, as well as traditional Navajo medicine practitioners. Only incidental utilization of private medical services is reported. Extended waiting times and translation from English to Navajo are major concerns in their contacts with providers. A surprisingly high availability of third-party insurance is noted. Comparisons are made between this data base and selected national and regional surveys, and with family surveys from other groups assumed to be disadvantaged in obtaining health care. The comparisons indicate somewhat lower utilization rates and more problems in access to care for this Navajo sample. The discussion suggests that attitudes regarding free health care eventually may be a factor for Navajo people and other groups, that cultural considerations are often ignored or accepted as truisms in delivering care, and that the Navajo Reservation may serve as a unique microcosm of health care in the U.S.

Westermeyer, J., Walker, D., and Benton E.
"A Review of Some Methods for Investigating Substance Abuse Epidemiology Among American Indians and Alaska Natives", White Cloud Journal, (1981), 2 (2), 13-21.

Since 1970 there has been increasing research interest in the epidemiological study of substance abuse among American Indians and Alaska Natives. A number of sampling and investigative strategies have been used with varying degrees of success. Among the sampling techniques used in research among Indians are community surveys, captive audience surveys, clinical samples, mortality statistics, alcohol/drug-related arrest records, records of conviction for alcohol/drug offenses, and the social indicator method. Procedures and instruments have included review of recorded data collected by institutions and agencies, serologic and breathalyzer tests, interviews, rating scales, questionnaires, collateral informants, psychological autopsy, and signs of alcohol addiction. Results have shown that there is great variation between tribes in the degree of substance abuse. No strong correlations between any of a number of factors tested have clearly illustrated the reason for variations in the substance use between groups of American Indians and Alaska Natives.

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APPENDIX

The Center for Rural Health was established in 1980 as an Office of Rural Health at the University of North Dakota School of Medicine. Since it's inception, The Center has been involved in promoting rural health as an active concern in discussions related to America's health care system.

Within The Center are two offices at the present time, the Office of Research and Policy Analysis and, the Office of Rural Health Services. The research arm is involved in a variety of research efforts related to five focal areas. These include: health manpower, the viability of rural health facilities, gerontology, Native American health care, and uncompensated care.

In addition to the research and policy activities of The Center, a variety of servic programs designed to meet the basic needs of rural hospitals, providers and communities are also provided. A brief overview of the service activities of the Office of Rural Health Services follows.

Physician Recruitment. The Health Manpower Placement Program recruits, places, and assists in retaining primary care physicians for rural communities. The program identifies stable, primary care physicians who are interested in long-term practices in a rural areas. The community's manpower needs are carefully matched with the personal and professional needs of the individual physician.

One of the features of the placement contract between The Center and a community is the Community Placement Report. Personal interviews are conducted with representatives of local health facilities, administrators, physicians, community leaders, and others who might influence local health care services and physician recruitment efforts. The interviews provide information about the local health care facilities and services, community demographics, utilization patterns, and other aspects of the community important to maintaining local health care services and recruiting physicians.

The Center works with contracted communities for up to two years. Through the continuing assistance, a community maintains access to the expertise of Center staff during the initial months following placement. To identify physicians with the best potential for establishing a rural practice, The Center individually contacts primary care physicians throughout the country, and introduces them to available practice opportunities. We often contact the physicians early in their training to enhance placement.

The Center does not simply place physicians; it matches physicians and spouses with communities. In addition to the above mentioned services, the program also includes the following services: credentials screening, community education, on-site visit coordination, and advertising.

Community Assessment and Development Program. Marketing is a tool that hospitals, clinics, and long-term care facilities can use to regain control over utilization of services within the community. The Center offers five marketing services through the Community Assessment and Development Program: education, research, audits, planning, and promotion.

Marketing Education. The Center's marketing education program has two components: an executive level session and a staff level session. Each session addresses the three themes of marketing concepts, application, and roles. The sessions are oriented toward the unique needs of two different audiences.

The day-long executive session helps administrators, managers, board members, department heads, and physicians learn that marketing is more than advertising. Emphasis of the session is on meeting consumer needs (research and audits), identifying strategies and actions to satisfy those needs (planning), and methods for conveying the message to the consumer (promotion).

The staff level session is a two hour presentation. All employees play a pivotal role in creating customer satisfaction. The staff session is specifically designed to offer employees a basic understanding of the marketing concept. Emphasis is placed on the importance of the employee to the success of the facility's marketing program.

Marketing Research. The survey-based research process is used by health care facilities to learn the needs and wants of area health consumers. In addition to image studies, service needs studies and competition studies can be performed. Service needs studies reveal what services people perceive as being needed in the area, what services they are likely to use, and the consumers' awareness of present services. Competition studies focus on utilization issues such as why people use the facility, why they go elsewhere, and where they go to have specific conditions treated.

While image, service needs, and competition are the three primary areas of focus under marketing research; these are not the exclusive studies. Special studies can also be initiated.

Marketing Audits. A marketing audit is both similar and dissimilar to marketing research. They are alike in that both are an examination or an evaluation of an organization's environment, activities, and processes. However, marketing research is generally associated with an external environment whereas a marketing audit is identified with an internal review. Another distinction is in the area of methodology. Marketing research is primarily a survey research based format involving mail or telephone questionnaires, sampling techniques, and statistical analysis. A marketing audit has as its methodology the use of one-on-one personal interviews, group discussion and review, and existing data review.

A marketing audit satisfies six basic organizational needs, including: 1) to collect background information about the organization, its competitors, and its marketplace; 2) to identify key environmental trends; 3) to identify strengths and weaknesses of the organization and its competitors; 4) to identify important opportunities to explore and threats to plan for; 5) to identify potential market segments and targets; and, 6) to create a framework to better understand consumer needs and wants.

Market Planning. In some ways marketing research and market audits have retrospective qualities. They both focus on creating an analysis of an existing environment and the conditions that over time have shaped that environment. A market based planning process has prospective qualities because it forces the institution to take existing data and ask questions to determine the future. Market based planning is important in a total marketing process because once the environment has been assessed a critical need exists to identify an action plan composed of specific strategies of change.

Promotion. A final marketing service is that of promotional material. A critical juncture in the marketing education process is the realization that marketing is not synonymous with advertising. Promotional strategies are created to communicate, educate, inform, and influence. Promotion is simply one part of a total marketing mix with advertising representing one type of promotional mix. Other promotional strategies involve the use of newsletters, annual reports, billboards and posters.

Advocacy Program. The advocacy program is directed at fostering the development of linkages by rural communities with appropriate associations, state legislatures, congressional delegations, and the federal bureaucracy. Much of the change in health care (e.g. prospective payment system, case-mix management, and sole community provider status) originates in the legislative-political arena. The Advocacy Program is designed to empower rural-based providers with the knowledge and skills to interact with legislators and political institutions.

Key components of the Advocacy Program include a working session on associations and information resources, a workshop on legislative advocacy, and a planning session to develop an annual advocacy plan. This process moves from as assessment of present information and association linkages to a thorough review of the federal and state political process to an action plan complete with activities and responsibilities.

Coalition Building. The experiences gained by The Center over the years has provided the conceptual and methodological foundation for embarking on coalition building in rural communities. Coalition building assists rural communities to maximize their resources. for example, networking and coordinating among several communities could provide those communities with a financial resource to develop and operate a new and innovative health care service.

There are three key components to coalition building. First is the identification of local leaders from various sectors in a community - health, education, religion, commerce and government. These leaders are brought together to form a team and develop a relationship of mutual interdependence. Second is community-wide involvement. This is achieved in a number of ways, town meetings and presentations to local organizations, to name a few. Third is a focal point for community commitment. This comes about when the local leaders with broader community input establishes priorities and begins to implement an action plan.

The role of The Center is to facilitate the bringing together of communities. By assessing their current situation through any number of means (e.g. survey, needs assessment), The Center can empower communities to take the needed steps to create a more unified health care system, promote effective use of health resources, and provide for greater access to health care services in rural areas.

Grants Development. The Grants Development Program is an integral function of the overall structure of The Center for Rural Health. The Center has traditionally operated on a majority of "soft" funds derived from grants and contract funding. As a result, proposals are constantly under development related to innovative and creative programs in rural health.

Examples of grants and contract proposals developed by The Center include: transition support for rural hospitals anticipating closure, nutrition education, quality assurance in frontier and rural areas, development of long-term care cooperatives, support of leadership training for rural residents, and a variety of health manpower programs.

An educational seminar on grantsmanship skills in the health field is under development. The seminar will focus on teaching basic grantsmanship skills to persons with limited or no grant writing experience. It is anticipated that the first sessions will occur in the Fall, 1988. Other grantsmanship services provided by The Center include literature searches, performing critiques of grants, and identification of funding sources.

For further information contact:
The Center for Rural Health
University of North Dakota School of Medicine
501 Columbia Road
Grand Forks, North Dakota 58201

(701) 777-3848

The Center for Rural Health
University of North Dakota School of Medicine